

MACDONALD COLLEGE JOURNAL



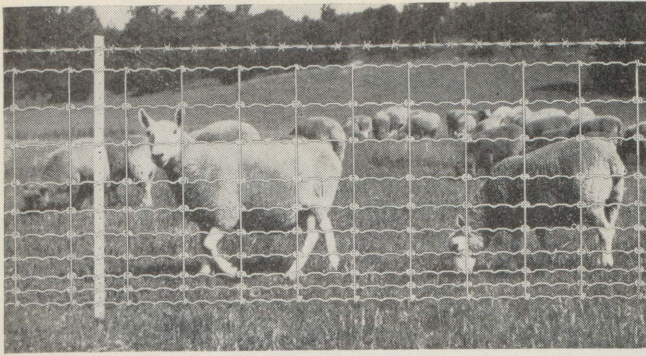
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A Beam in Darkness

Contributed

On the eve of the first world war, Earl Grey of Falloden, standing in the window of his room in the Foreign Office overlooking St. James Park, sadly remarked, "The lamps are going out all over Europe. We shall not see them lit again in our time."

Twenty years later the lamps of Europe were dimmer than ever and all over the world other lamps also were going out. But gradually, with a deep feeling of moral obligation, the freedom-loving nations of the world joined forces to combat the growing menace of dark fascist tendencies and have finally achieved the unconditional surrender of their enemies in Europe.

The causes of this holocaust are many and are embedded in various ways of life. Much has been spoken and written about them by brilliant world leaders, writers and orators. Much has been done and is being done to reorganize the affairs of the nations so that another world war may not occur. Such world planning must be done by men chosen for that special purpose. But the power of the ordinary individual must not be under-estimated; the power that his thinking can have upon ultimate results, if only he *will* think, and will learn to think clearly.

"As a man thinketh, so is he," but to be a person of worth and dignity a man must of necessity face facts and really see them in the light of universal truth.

The greatest of all teachers said, "The light of the body is the eye: if therefore thine eye be single, thy whole body shall be full of light. But if thine eye be evil, thy whole body shall be full of darkness." Man can and too often has died courageously for mistaken ideals, plunging others into disgrace and despair. The light that was in these men was darkness, and how great was that darkness! The degradation of the prison and concentration camps in Europe today is the result of wrong and evil thinking, and the blame lies not only on those in power but also on those followers who followed thoughtlessly, blindly.

On the other hand, the history of the struggle of mankind for freedom illustrates what singleness of purpose and determined thinking can do. The Magna Carta and the Bill of Rights came into being because brave men refused to be slaves. Men like Lincoln saw that

man cannot really live half slave, half free. And in our own day untold thousands will not have died in vain if those who follow will realize that mankind cannot be truly free as long as slavery exists anywhere in the world.

And now as the lamps are being relit in Europe and as the Allies continue the war in the Pacific, we must all, as Roosevelt said, look to the future with steadfast faith, for,

"We have but faith — we cannot know,
For knowledge is of things we see.
And yet we trust it comes from Thee,
A beam in darkness: let it grow."

That beam will grow here in our own communities when we as ordinary individuals try to overcome our personal prejudices, to understand each other's problems and to work together for the common good.

It will grow in our country as we become less provincial and more federally minded; as we take a constructive interest in our Government, as we continue to accept controls and shortages so that less fortunate countries may also have food, clothing and shelter.

It will grow in the occupied countries as the people are adequately housed, clothed and fed; as the common soldiers of the armies of occupation help them to rebuild not only their country, but their lives.

It will grow over all the world when men no longer see through a glass, darkly (so often a looking glass reflecting their personal desires or grievances) but when men finally see face to face in the light of human understanding. Then mankind will be

"No longer half akin to brute,
For all we thought and loved and did
And hoped and suffered is but seed
Of what in them is flower and fruit."

Our Cover Picture

The young lady on the cover this month has taken time out from working in her Victory Garden to see how the tulips are coming on. Photo by the Editor of his daughter.

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Industry Looks to the Farm

(From the Farm Broadcast on "Chemurgy" of April 23rd.)

Chemurgy! That sounds like a ten-dollar word. But it isn't! It's a hundred-million dollar word, for that sum is what Chemurgy can contribute to Canada's national income. Chemurgy, according to the dictionary, is the science which explores and promotes the industrial use of agricultural products.

More simply and clearly, it means rubber from wheat, paper from straw, plastics from soy beans, paint from peanuts, alcohol from sawdust, glue from corn, penicillin from whey, and so forth.

Chemurgy as a science is not new. We have made cloth from cotton, linen from flax and paper from wood for centuries. Neither is it a war baby. But it did gain impetus from another great conflict — the depression of the thirties, when we had scarcity in the midst of plenty and an awful waste of materials and men. For one of Chemurgy's main objects is the utilization of waste or what we used to know as waste, and Canada chemurgists have concentrated on that object. They have been finding uses for agricultural and forest wastes and surpluses with a view to balancing supply with new demands in the interests of a more stable farm income and the development of new Canadian industries.

The war, bringing shortages of many materials formerly imported, has caused us to go far beyond chemurgic horizons of even ten years ago. A great quantity of Canada's former 600 million bushel wheat surplus has been swallowed up in mechanical throats and digested in mechanical stomachs to make synthetic rubber at the rate of 8 pounds of rubber from one bushel of wheat. You cigarette smokers can thank Chemurgy for the fact that you have had cigarettes during the past three years. We used to import hundreds of tons of linen rags to make cigarette papers, but the war forced Chemurgists to seek a Canadian raw material and today a plant at Winnipeg partly processes and a plant at Beauharnois, Quebec, finishes making our cigarette papers — making them out of flax straw, which used to be burned as waste by Western farmers. Here is a new industry. Here are new jobs. Here are dollars earned from material once destroyed as useless.

New developments are coming thick and fast from the research laboratories. Even the lowly weeds serve industry through Chemurgy. Milkweed floss is used for stuffing life-preservers and rubber can be made from the Russian dandelion, now grown in parts of Canada. Milk can be made into cloth and potato peelings can become a plastic. Some of these experimental developments will never become practical projects, but many will.

Most practical is the attitude of Canadian Chemurgists towards the creation of new products and new markets from new crops with special industrial purposes. Of these

the soybean offers perhaps the greatest number of possibilities. From the soybean are made emulsifiers, cosmetics, medicines, glycerine, soaps, insecticides, motor oils, paints, varnishes, enamels, waterproofing materials, adhesives, sizings, leather dressings, putty, rubber substitutes, textiles and plastics — all in addition to its use as a human and animal food.

Corn, never a large crop in Canada, appears to have a tremendous chemurgic future. It can be made into syrup and starch, of course, but what remains after these processes can be used to make waterproof glues and finishes, core binders for metal foundry work, ore dressings for the mining industry, sizings for paper and finishes for textiles.

Sulphite wastes from paper mills are used to grow yeast for making bread, and also yield lignin which is made into wallboard at Cornwall, Ontario. Whey from our cheese factories is the food for penicillin. Let these examples suffice.

Some chemurgic crops will compete for acreage with food and feed crops, but more frequently increased production of a crop will mean more food for man and animals and more raw material for industry. It amounts to this: through Chemurgy the proportion of usable wealth to be derived from an acre's production is growing bigger. Industry is going to the farmlands for new materials, many made from former wastes. Did I say Chemurgy is a hundred million dollar word? As long as the sun shines and the rain falls on arable land that value will increase!

Whey for Penicillin

Some 1500 farms in Ontario and Quebec are planning to salvage their whey, much of which was formerly poured in creeks and cesspools as useless waste. By selling it for the manufacture of milk sugar, these cheese factory patrons have indirectly played an important part in reducing the cost of penicillin — now available in infinitely greater quantities than ever and at a price less than one-tenth of what it was only two years ago.

But the conversion of whey to penicillin is only one of the marvels accomplished by chemurgy.

No one heard much about it before 1938. It was a *new* word coined in the United States where science has since progressed so far that horses eat licence plates. Why not? They're made from soy beans now and taste good to horses. Wall board, plasters, shoe soles and synthetic wools are some of the other palatable things that the soy bean has given to man in the past few years. So far in Canada, the production of soy beans has been limited so the manufacturer has concentrated what supply he can get on manufacturing oil and protein feed.

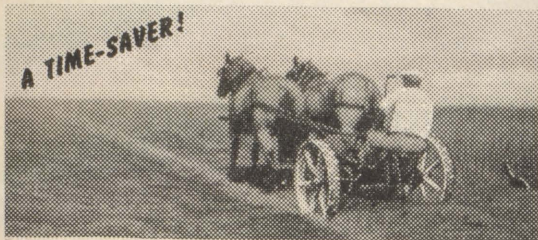
(Continued on inside back cover)

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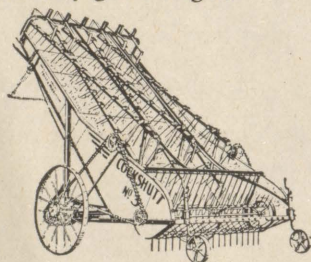
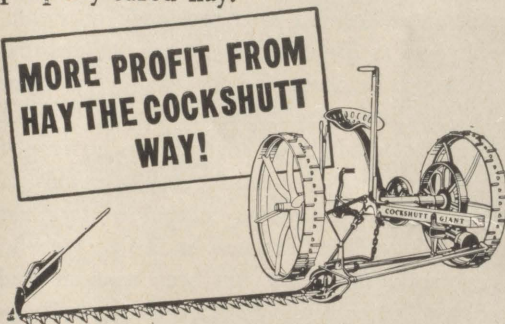
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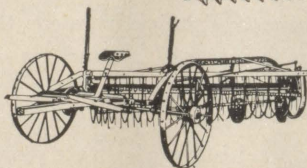
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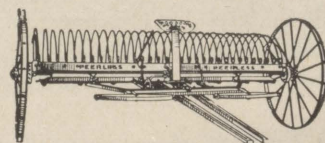
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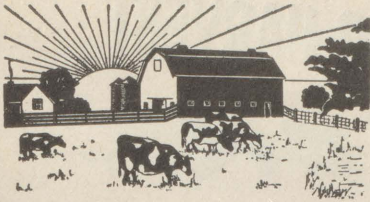
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AGRICULTURE

Articles on problems of the farm

The Control of Acute Coccidiosis of Chicks

by W. E. Swales*

Acute or bloody coccidiosis is a parasitic disease of chicks that appears to be on the increase rather than on the wane. It has been estimated that from 12 to 20% of all baby chicks hatched in the United States die from this disease before they reach the age of one month (Annual Report, Bureau of Animal Industry, U.S. Department of Agriculture, 1944). In Canada there are no figures for percentage losses but all poultrymen know that chicks raised in wire-floored brooders until they are from three to eight weeks old are in real danger as soon as they are released on to soil or on to the floor of a larger brooder house. As the disease is caused by a protozoan or single-celled parasite, known as *Eimeria tenella*, it is obvious that the soil or floor has to be contaminated with the cysts (or oocysts) before the disease can break out in a group of chicks. However, most adult birds are immune carriers of a few of the parasites so that the infection is present on practically every farm; thus, unless scrupulous care has been taken the chicks will be exposed to the parasites as soon as they contact a place that has been contaminated by the droppings of older birds. Such exposure, if it can be controlled, may actually be beneficial, because a light infection at the start or at a very early age usually renders the chicks immune to the dangerous, bleeding form of the acute disease.

A typical outbreak of acute coccidiosis has a history

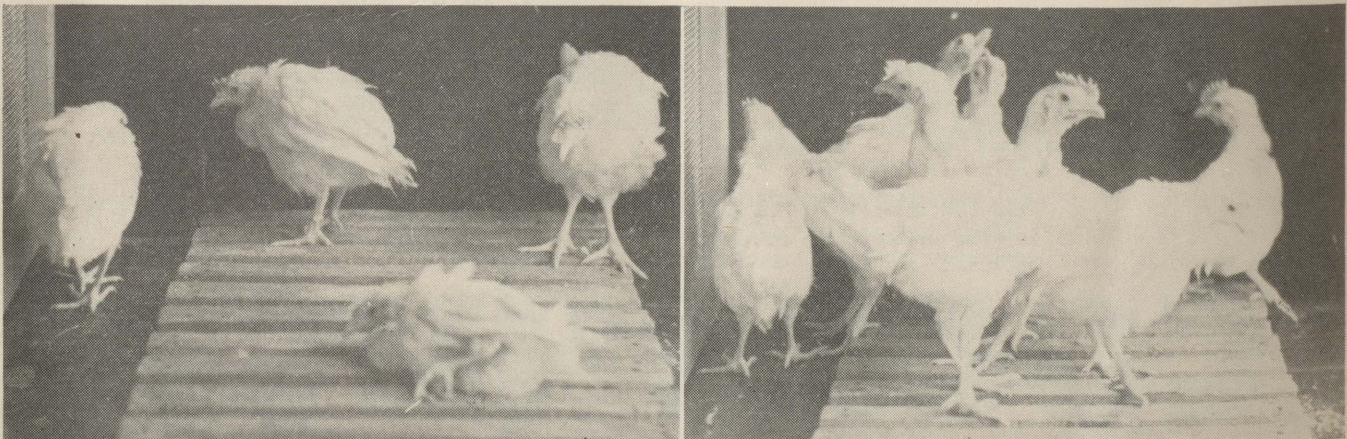
*Division of Animal Pathology, Dominion Department of Agriculture, Institute of Parasitology, Macdonald College.

somewhat as follows. The first groups of chicks from the wire brooders are placed on a floor together and they continue to thrive quite well; about two weeks later another younger lot (from 4 to 6 weeks of age) is placed with them, and four days later a number of bloody droppings is noticed. During the next three days as many as 30% of this younger group may die from loss of blood, and an equal percentage may develop into useless weaklings during the next month. Meanwhile the older chicks remain healthy. Such an outbreak can be readily explained; the first lots became exposed to a few parasites and became immune, but in doing this they multiplied the contamination on the floor many times so that the following group of chicks was suddenly exposed to enough of the oocysts to cause the acute disease.

Outbreaks stop just as suddenly as they start, because the chick either bleeds to death quickly or starts to recover, at least partially. This sudden and natural cessation of symptoms produces not a few undeserved reputations for drugs and special feeds.

Many methods of controlling the disease have been advocated; the ones that have a sound experimental background are:—

- (1) Strict isolation of chicks away from all places contaminated by the droppings of older birds until they are more than ten weeks old.
- (2) Thorough sterilization of contaminated floors with very hot water. As coccidia survive in many dis-



Left: Survivors of a group of eight birds a few days after being exposed to coccidiosis.

Right: A comparable group a few days after exposure. The birds were given an experimental treatment as they began to bleed.

infectants but are easily killed by heat, cold solutions are not reliable; dryness is important as a continuous method because the parasites need moisture in order to develop to the infective stage.

- (3) A three-year rotation plan for ranges and wire floors with protected dropping boards for range shelters.
- (4) Flowers of sulphur, used as 2% or even 5% of the mash before the chicks are exposed, and for about five days after, will often prevent the infection from becoming established. However, sulphur stops the absorption of calcium from the chicken's intestines and unless full sunlight or extra feeding oils are made available, a few days of sulphur feeding may bring on rickets. This method should be used with care; it is preventive *but is quite useless after chicks have been infected*. Also, protected chicks may still be susceptible to later exposure.
- (5) Milk products have been widely used but their action has been largely confined to increasing appetites and nutritional levels of rations, thus helping recovery. They have no direct curative or preventive action.
- (6) Another method under trial by the Division of Animal Pathology is the early exposure of young chicks to a degree of infection that will produce immunity against serious exposure later. On many farms the method may now be practical, particularly if a curative method is held in readiness in case of too heavy exposure to contaminated surroundings.
- (7) Very recently a group of sulphonamide drugs, with pyrimidine structures on the sulphanilamide base, have been found to have remarkable curative effects on acute coccidiosis, even after the birds have reached the bleeding stage. The drugs concerned will not replace other methods, but can be used to stop heavy death losses at the beginning of an outbreak.

The curative method (7, above) is not yet out of the experimental stage, but it is now certain that it will be used as a valuable adjunct to general control. As it will cost from 3½ to 5c to treat one bird, it should be used on groups that are obviously badly infected, rather than as a general flock treatment. The first group of experiments, the results of which have been published in the Canadian Journal of Research, showed that the sulphonamide-pyrimidine drugs when well mixed at the rate of 2 grams per pound of mash and given to the infected chicks as soon as bleeding commenced and for a total of not more than five days, the death rate was lowered from about 45% to 5%. In many tests the recovery of treated groups was 100%.

If poultrymen desire to try out the sulphonamide treatments they should approach their veterinarian to arrange for a supply of "Sulfamerazine," "Sulphamezathine" or "Sulfadiazine" and use it properly when an outbreak occurs. These drugs, in common with all others in their group, must not be used promiscuously or they may cause losses which will lead to a hurt reputation of a weapon that will undoubtedly stop serious losses in the future.

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Agricultural Engineering Notes

by L. G. Heimpel

Better Hay By Barn Drying

Hay is without doubt the largest and most valuable single farm crop in eastern Canada, but it would be infinitely more valuable if we could prevent the losses caused annually by weathering and through the loss of leaves which is suffered when clover and alfalfa hay gets too dry in the field. Barn drying, or the drying of hay in the barn by blowing air through it in the mow, promises to prevent both these losses.

For many years scientists have been trying to find a way to make sure of a larger percentage of good quality hay, and the answer seems to be barn drying. The method described here was developed largely by the Agricultural Engineering Division, Tennessee Valley Authority, Knoxville, Tennessee, and is now in use on many farms in the United States. While the practice is still comparatively new, it has been found very satisfactory in many areas and it is now possible to design drying installations which make possible first class hay at low cost.

Equipment Needed

A hay drier consists of a system of wooden ducts or tubes laid on the floor of the hay mow and a fan of suitable size and shape for the job, together with some form of power to drive the fan. Where electric power is available, this is the most convenient, but gas engines can also be used.

The accompanying drawing shows the arrangement of ducts and blowers for a typical rectangular hay mow. Air is delivered into the large central duct or tunnel, as it is sometimes called, and from there is delivered into the lateral ducts which carry the air evenly to all parts of the mow. The large centre duct must be reasonably air-tight, but the lateral ducts consist only of the side boards and the

top. The bottom of the laterals is open and the duct is held one inch off the mow floor by wooden strips nailed across the bottom of the ducts. It is essential that the mow floor be smooth and reasonably air-tight.

The ducts can easily be made by anyone handy with tools, but it is important that the system be carefully designed and that the correct size of fan and power unit be used for each installation. Engineering assistance is necessary for this.

What It Costs

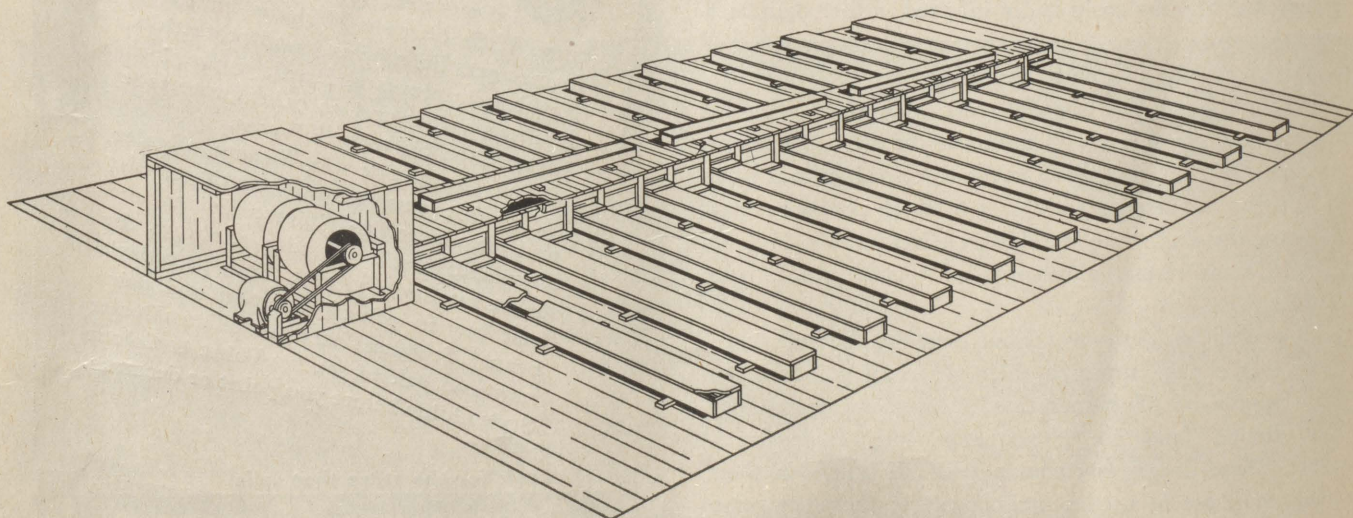
The cost will depend on the size of the installation. Systems which have been installed in the U.S. come to from 15 to 20 cents per square foot of mow floor covered. This includes lumber, the fan, wiring for the motor, pulleys and belts, labor and one-quarter of the cost of the motor. It is considered that where an electric motor is used it will be of service for many other jobs on the farm, therefore a quarter of its cost is an ample charge for the hay drier.

In round figures, systems cost all the way from \$75 for a small drier in a mow 18 by 36 feet, using a 1 H.P. motor, to \$450 for an installation in a mow 34 by 66 feet, using a 7½ H.P. motor.

Making Hay With A Drier

New mown hay usually contains about 75 per cent moisture. Dry hay contains about 20 per cent. For mow drying it should be put in the mow when it still contains from 30 to 45 per cent moisture. When handled this way it not only saves all the leaves, but the hay will still have nearly all its green color.

The crop should be cut in the morning after the dew is off and allowed to dry about two hours in the swath. It is then raked into windrows and allowed to dry this way for from two to four hours, depending upon the weight of



Plan of ducts and double fans system for barn hay-drier.



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the crop and drying conditions. On a clear, sunny day the moisture content should be reduced from 75 per cent to 45 per cent in from four to five hours.

It is usually advisable to start hauling when about 45 per cent moisture is still present, then, by the end of the day, the last hay hauled will still contain enough moisture to prevent loss of leaves and color. Users of driers soon learn by experience when the moisture content is right to begin hauling; when too tough there is a tendency for the hay to wind on the rake and loader. It is good practice to cut each day no more than can be placed in the mow the same day after hauling starts.

The method of handling the crop is about the same as in ordinary haying, but it is important that the hay be well pulled apart in small forkfuls and distributed evenly over the mow. Uniform compactness and depth of hay over the flues are essential to successful use of the drier. Hay put in the mow in this condition compacts a good deal more than hay that is considered "fit" in ordinary haying practice, which is a help in securing uniform resistance to the passage of air in the layer. When the depth of hay over the ducts reaches 8 feet no more should be added until this layer is completely cured. The total depth of hay in the mow should not be much over 15 to 16 feet, though some

users have successfully dried hay to depths of over 20 feet.

Advantages of Barn Drying

Farmers of the State of Virginia, who have perhaps the longest experience with this new method of hay drying, and the agricultural authorities of that State, sum up the advantages as follows:

1. Danger of loss, due to poor weather in haying, is practically eliminated by barn drying.
2. The labor requirement is no greater, in some cases smaller, than in field curing.
3. Mow storage capacity is increased up to 50 per cent.
4. High quality hay can be produced from any good quality forage crops usually made into hay.
5. The Dairy Extension Specialist estimates that a farmer with a 30 cow herd and feeding good quality barn dried hay may save at least a quarter of the forage crops normally lost or damaged by field curing, may increase annual milk production and save up to 7 tons of high protein concentrate feed.
6. Cows are said to maintain higher levels of milk production over longer lactation periods, to give milk of improved color and vitamin potency and to maintain themselves in better physical condition when fed this higher quality hay.

Poultry Questions Answered

by W. A. Maw

How can fast feathering be detected in baby chicks?

Fast feathering in chicks refers to the rate of feathering during early growth and ensures a well-feathered body (wings, back and tail) by 8 weeks of age. Such stock is preferable for broilers. Most stock is sorted at 10 days of age by the tail feathering in the fast-feathering individuals, whereas the slow-feathering individuals have no tail feathering. Wing feather development is also greatly advanced at the same age. If selection is not made at 10 days, the chicks may also be sorted at 4 weeks of age. At one day of age close examination of the wing feathering shows primary feathering to be half again as long as the covert feathering in the same section.

Is shade necessary for growing chickens, ducks and turkeys? Shade, or the protection of young stock from continuous exposure to the direct sun, is essential to normal growth and livability. Oftentimes young chicks, ducklings or turkey poults are lost due to exposure to sun without any means of getting out of it when nature tells them to seek a shaded area. Houses can be raised on blocks to allow for a shaded area below or artificial shades can be constructed by frames of burlap or bag material. Crops, such as corn, sunflowers or artichokes, may also be sown in rows for early season shade.

Can future breeding males be selected at 6 to 10 weeks of age? Too often the most vigorous-growing good type cockerels are sold as broilers and the balance may be grown to mature size from which breeding males are selected. Future breeding cockerels should be: first, individuals of known breeding as regards egg production and egg characteristics of the dam and the sire's dam; second, the individuals should be selected on the basis of family hatch-ability and livability; third, only the birds having good body type, good feathering and body size at the broiler age — ten weeks. Ultimate body shape and size can be easily judged at this age. As well, the breeders should be selected from the chicks hatched during late March and April where possible, as the individuals should be well developed as breeders by late November.

How should broilers be fed to fatten at 10 to 12 weeks of age? Cockerel stock to be dressed as broilers at 10 to 12 weeks of age should be fed the chick starter ration up to at least 7 weeks of age, after which time scratch grain can be fed in hoppers in addition to the mash. The birds should be ranged on a good pasture of mixed grasses and clovers or cereals. If pasture is not available, other green foods should be provided. Freedom to range during early growth produces a firm, full muscle, which, when finished by fattening through wet mash feeding, will have a high grade finish. If the birds show very yellow coloured skin and shanks, two per cent bone char or feeding char-

coal may be added to the fattening mash to bleach the colour of the skin. The fattening mash should be fed for at least two weeks before date of sale or dressing.

How can summer egg production be kept up?

There may be a tendency for some layers to slacken off in rate of egg production during the early summer. It is only natural that the poorer layers will stop laying sooner than the good layers. These poor birds should be removed and sold for meat. The remaining good birds should be given extra feeding to encourage greater mash and green feed consumption. Moist mash may be fed at noon. Extra green food, either through pasture or cut greens, such as lawn grass, cereals or vegetable tops, should also be given. Where the layers have lost body weight, it may be advisable to feed a fattening mash by placing a small amount of dry fattening mash on the laying mash in the hoppers during the early morning. Extra grain feeding may also be advisable to regain body weight.

What simple method of moist mash feeding is recommended for laying stock? Where numerous pens of birds are to be fed a moist mash, the usual practice of mixing a crumbly mash in a tub at a central point and then distributing it by carrying it in pails to the various pens involves considerable time and labour. Where trough-type mash hoppers are in use, a simple method of providing moist mash has been developed. Simply take the liquid to be used, whether skim milk or water, in a pail, or better yet in a watering can with a spout. The sprinkler cap is removed. Carry the can into each pen and pour a stream of liquid on the surface of the dry mash in the hopper, leaving as much as is necessary to make up the required amount of moist mash for the number of birds in the pen. The birds will mix the mash to suit themselves and clean up all moist mash in the trough, providing, of course, that only the proper amount of liquid is given. Close observation will determine the correct amount. About one quart of water divided into the hoppers used in a 100-bird pen is the required amount. Avoid having any moisture left in the hopper.

A New Co-op at St. Anselme

St. Anselme, Dorchester County, already well known for the number of its progressive co-operatives, will soon have its own regional fowl killing station. The decision to build the plant was taken at a recent meeting of interested farmers from the counties of Bellechase, Dorchester, Levis, Lotbiniere and Beauce. This district raises some 450,000 birds every year and the new station will serve poultry raisers within a radius of forty miles. Applications for membership are now being accepted.

Why Not De-horn?

by J. E. Bisson

It has long been a practice among cattle buyers to deduct \$1.00 per head for all cattle sold with horns, and this practice applies whether sales are made on the public markets or at the slaughter house. Slaughter houses all across the Dominion adopted this policy some years ago to compensate themselves for damage from horning during shipment, and also in an effort to induce cattle raisers to de-horn their young stock. The deduction applies only to animals weighing 400 pounds or more.

In all the Western Provinces legislation has been passed in an attempt to make all cattle raisers de-horn their animals so as to minimize these shipping losses. The \$1.00 penalty is still imposed on all cattle sold with horns, but it is remitted to the government where it is placed in a special fund which is used to promote better breeding. Manitoba used this money to establish a programme of improvement through the elimination of grade sires, replacing them with pure-breds and paying transportation charges on the new bulls. Short courses on stock raising were also provided. The first artificial insemination projects in the West were paid for, in part, by funds raised in this manner, and in this way valuable sires were made available to Manitoba cattlemen.

In Alberta and Saskatchewan legislation has been passed making it obligatory to use money received as penalties for the sale of horned cattle for the improvement of cattle-raising procedures.

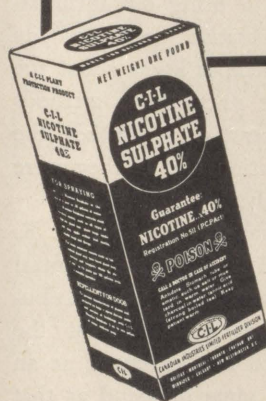
Ontario will soon follow the example of the Western Provinces, for it is proposed to introduce a bill which will make available to the Treasury all monies collected in this way, to be used to finance a programme of cattle improvement in that province.

The number of cattle sold for beef in Manitoba, and which have not been de-horned, is about one-quarter of the total marketed, and in Ontario the figure is about one-fifth. This means, in Ontario, that the very respectable

amount of some \$80,000.00 a year will be available for their programme of improvement.

The percentage of cattle which go to market in Quebec still adorned with horns is greater than in Ontario, although the total head marketed here is lower. If Quebec were to adopt legislation similar to that projected for Ontario, it is estimated that a sum of between \$25,000 and \$30,000 would be raised, and there is no doubt that our breed associations could use this money to good effect.

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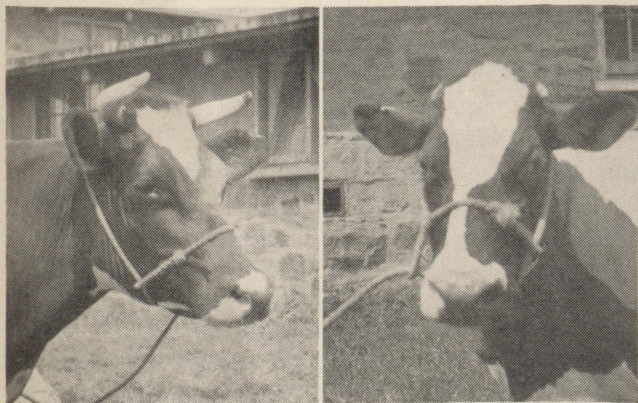


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CO-OPERATION AND MARKETING

A page of interest to members of farmers' co-operatives

Co-ops. Hold Study Days

Managers and presidents of co-operative societies in the Montreal and Three Rivers Districts turned out in strength to attend study meetings during April.

The Montreal meeting was called by R. Martin, secretary of the Co-op. Fédérée, to give directors of the local co-operative societies a chance to get together and study problems of administration, and to discuss the relation between local co-ops. and the Co-op. Fédérée. There were no set speeches at this meeting: each delegate was invited to give his views on a series of questions that had been prepared beforehand. The first set of questions dealt with administration, and were designed to bring out information about how each local co-operative conducted its affairs: how much the individual member knew about the principles of co-operation; whether co-operative methods were properly understood and practised; whether the members really believed in co-operation and if they were ready to back their society financially.

The various replies were ably summarized by Mr. R. Ferron, Assistant Director of Services for the Provincial Department of Agriculture. In a discussion of the distribution of patronage dividends it was revealed that the St. Polycarpe co-operative offered to non-members, as an inducement to join the society, the same dividend as that payable to regular members, applying this as the first payment on a share. Other co-operatives, it developed, did the same thing and it was decided that this action is quite in accordance with co-operative principles.

On the second day of the meeting the subject for discussion was the Co-opérative Fédérée and its services, and the heads of the various departments were on hand to give information. Nearly the whole day was devoted to a discussion of grain and feed, and some twenty-five questions were worked over. It was found that a number of co-operatives are starting grinding services and their representatives were particularly interested in discussing methods of grinding, the value of the service, costs, etc. Selling prices, sale prices to members, prices for quantity sales and sales to other co-operatives received particular attention.

The question of seed grain was also thrashed out thoroughly. Members of co-ops. producing seed oats questioned if it was worth while to continue to produce seed with yields of about 40 bushels to the acre while producers in other provinces were able to get much higher yields. It was pointed out that Quebec had had two bad years for seed grain production, which has had much to do with the

situation. It was hoped that the coming season would be better and that buyers, who seem to prefer to get their supplies elsewhere, would be offered Quebec-grown seed that would be the equal if not superior to any other.

Discussing chemical fertilizer, it was reported that orders had been received early, but lack of freight cars had interfered with deliveries. It was expected, however, that the situation would soon right itself.

Butter co-ops had their innings next and it was agreed that high quality butter, containing the proper amounts of water and salt, must continue to be produced. The question was raised whether or not the Co-opérative Fédérée should undertake retail sales of butter: this could not be answered at the moment, but will be studied further. The question of cold storage during the summer was also discussed.

In a general discussion of administration details it was generally agreed that proper office equipment adds greatly to the general efficiency of a co-operative, and members admitted that proper bookkeeping and accounting machines should be installed whenever possible.

The study-sessions lasted three days and were formally closed by Mr. Girard Massue, vice-president of the Co-opérative Fédérée. Accompanying the executives of the local co-operatives were the district and local agronomes, who have always shown keen interest in the co-operative movement.

Three Rivers Discussion

The meeting at Three Rivers was called by J. E. Roy, regional agronome, and questions pertaining to the distribution of patronage dividends and the acquisition of new members were on the programme. Representatives of all the nineteen Co-opératives in the district were present, and the total number, including interested farmers, was around 150 persons. Assisting were R. Ferron, L. Descoteaux, Chief of the Rural Economics Service of the Provincial Department of Agriculture, R. Martin of the Co-op. Fédérée and the local agronomes. As was the case at the Montreal meetings, no set speeches were arranged, but each representative was invited to tell how his particular co-op. dealt with the various problems on the discussion paper, and then the various replies were summarized by one of the officials mentioned. No very divergent practices were described, but it was evident, listening to the discussions, that the delegates were really getting something of value from this meeting and the opportunity of becoming acquainted with other co-operators in their district.

Wool Growers Report Capacity Year

The 27th Annual Report of the Canadian Co-operative Wool Growers describes 1944 as "another year when all the facilities of the organization were taxed to full capacity." Five Government Registered Wool Grading Warehouses were operated, three of which were open throughout the year.

The wool clip overall was not in quite as good condition as were the last two Canadian clips in that some of the wools were heavier, carrying more earth and grease content. It can, however, rightly be termed an average clip. The Domestic wools were noticeably better prepared in those provinces where the 4 cent Wool Bonus was rigidly applied. The Wool Bonus Policy will again be in effect on the 1945 clip in those Provinces participating with the Dominion in this policy.

The average farm price for all Canada is given at 27.1 cents per pound. The average fleece weight is 7.5 pounds, ranging from 6 pounds in Nova Scotia to 8.5 pounds in Alberta, and the number of shorn sheep 2,006,600 — an increase of 140,000 over the previous year as reported by the Dominion Bureau of Statistics. In comparison, the average U.S. price was 42.4 cents per pound, the average fleece weight 7.83 pounds and the number of sheep shorn 44,000,000 — a decrease of 4,000,000 from 1943. In both Canada and the United States the Governments buy the Domestic clips at stated prices.

Shortages in woollens for civilians continue and no immediate improvement is yet in sight. Wool stocks are sufficient for all reasonable requirements, but military needs coupled with labour shortage, leaves the civilian supply of manufactured goods short. Also, less is heard of late concerning stock piles of wool on this continent and this because these much talked of stock piles have been steadily going into consumption. The demand for wool continues active, particularly on all Medium types.

Reviews Co-operative Objectives

The objectives of the Wool Growers Co-operative are two-fold — first, to secure for the individual wool grower the full market value for his wool and secondly, through preparation and grading, to place an improved product on the market, both at home and abroad. Surely it must be conceded by all fair minded persons that thousands of individual wool growers with the need to market only once a year, have every right to market their product in such a manner as to give them the maximum returns for their efforts. More than a quarter of a century ago it was the opinion of the pioneers that a growers' co-operative selling agency best fulfilled their hopes. That the same is true today is best evidenced by the continued support of the wool growers across Canada to the same Organization and the same system of marketing as was started 27 years ago.

MARKET COMMENTS

The numbers of live stock slaughtered under inspection for the first 13 weeks of 1945, that is the first quarter, records considerable change from the figures of the corresponding period of the previous year.

The number of cattle slaughtered increased by over 40 percent. The number of calves was over one-quarter higher. Sheep were down in number by about one-eighth while the number of hogs was down almost one-third.

During the month beef cattle prices firmed a trifle while veal prices declined. This is a seasonal development and is only mentioned here to illustrate how limited is the possibility of use of substitutes for some things even as expensive as meats. Records show that Canadians do not consume very large quantities of either veal, lamb, poultry or fish. The major portion of meat consumption consists of beef and pork. These two meats may be and are substituted for one another depending upon both price and quality.

Eggs are being exported to Britain in large quantities in the shell this year. This is the first time since 1942 that eggs in the shell have been sent to Britain. During the past few years, dried eggs have been the form in which exports have been going forward. This business continues in addition to the fresh eggs now going forward.

The weather continues to be among the most important factors in market comments. Grass and flowers are in some areas just about one month ahead of some seasons. Yet frost, particularly the one on April 23rd, is reported to have done irreparable damage to apple blossoms.

Trend of Prices

	April 1944	March 1945	April 1945
	\$	\$	\$
LIVE STOCK:			
Steers, good, per cwt.....	12.25	12.38	12.53
Cows, good, per cwt.....	9.10	9.05	9.27
Cows, common, per cwt.....	6.95	6.98	7.15
Canners and cutters, per cwt.	5.82	5.55	5.77
Veal, good and choice,			
per cwt.....	12.95	14.98	13.03
Veal, common, per cwt.....	8.85	13.47	9.35
Lambs, good and choice,			
per cwt.....	6.00-7.00		7.00-12.00
Lambs, common, per cwt.....	8.85	8.70	8.58
Bacon hogs, dressed B.1,			
per cwt.....	17.15	17.83	17.80
ANIMAL PRODUCTS:			
Butter, per lb.....	0.35	0.35	0.35
Cheese, per lb.....	0.21	0.21	0.21
Eggs, Grade A, large			
per doz.....	0.35½	0.35½	0.35½
Chickens, live, 5 lbs. plus,			
per lb.....	0.30⅞	0.29¾	0.29¾
Chickens, dressed, milk fer			
A, per lb.....	0.37⅞	0.36	0.37
FRUITS AND VEGETABLES:			
Apples, B.C. McIntosh,			
extra fancy, per box.....		3.25-3.40	
Apples, B.C. Winesaps,			
extra fancy, per box.....			4.00
Potatoes, Quebec, No. 1, per			
75 lb. bag.....	1.85-1.90	1.60-1.80	1.65-1.85
Bran per ton.....	29.00	29.00	29.00



DEPARTMENT OF AGRICULTURE

Activities, Plans and Policies of the Quebec

Department of Agriculture

Livestock Men Meet at Quebec

The re-organized Quebec Livestock Breeders' Association, now officially known as the Quebec Society of Pure-bred Livestock Breeders, held its fiftieth annual meeting in Quebec City on April 12th, following meetings of the individual associations which make up the general society, which were held on the two days previous. A splendid attendance was recorded and the business of the Society was handled with efficiency and dispatch.

Most important of the items on the agenda was the ratification of the new constitution of the Society, which replaces the charter under which the organization has operated since it was founded fifty years ago. The new Society is solely an association of member groups whose object is to help its members in all phases of their work, to represent their interests by providing a means of centralizing efforts toward improvement in livestock raising, and to be a link between the breeders and the various Government departments. Supreme authority is vested in the General Meeting, which consists of one delegate from each member-group of the Society, plus one delegate for the first 51 members and another for each additional 100 members of each group; one delegate from the Livestock Service of the Provincial Department of Agriculture; one adviser from each of the five agricultural, dairy and veterinary schools of the province. Voting privileges are restricted to the delegates from the member-groups.

The new constitution was read in its entirety and accepted with hardly a question being raised.

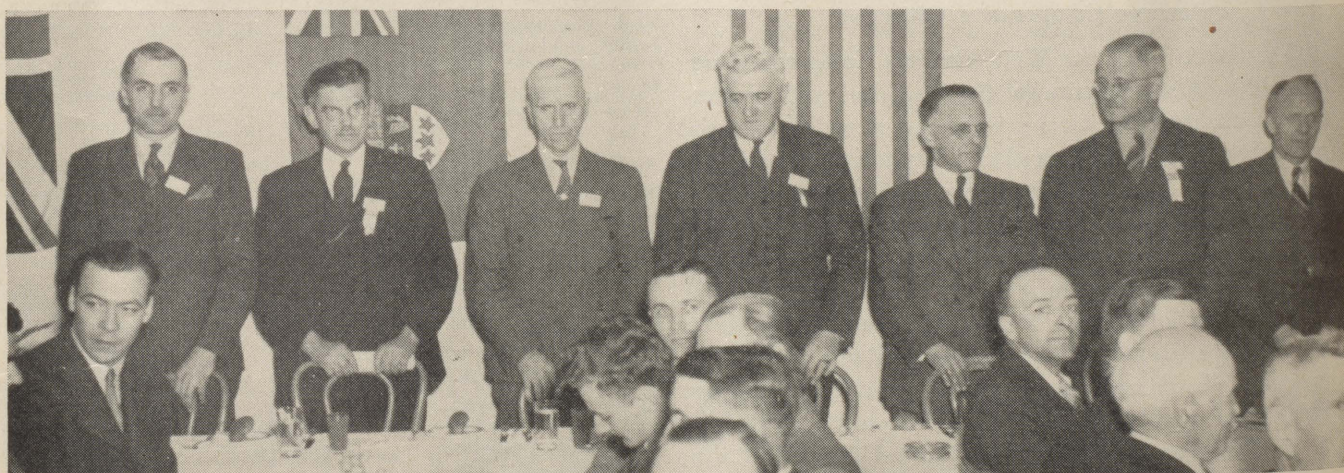
The report of a special committee, appointed to study the role of breed associations to the livestock industry, was

read in French by the secretary, R. P. Sabourin, and aroused keen interest. The text of the report will be published in the next issue of the *Journal*. Prof. Paul Emile Bernier of Ste. Anne de la Pocatiere held the attention of the gathering with a very lucid and well-presented outline of the principles of heredity, showing with the aid of charts just how certain characteristics are transmitted from generation to generation, and what might be expected to result from various crosses. This was followed by a talk by Prof. A. R. Ness of Macdonald College who spoke on ways and means of improving livestock. His paper is published elsewhere in this issue.

Banquet Well Attended

The newly-elected president of the Society, the Hon. Antonio Elie, presided at the banquet in the evening, attendance at which taxed the capacity of the hall to the utmost. Among the speakers were pro-mayor Gagnon representing the City of Quebec, George Bouchard from the Federal Department at Ottawa, Minister of Agriculture Barre, who welcomed the guests on behalf of the Provincial Department of Agriculture, Opposition Leader J. A. Godbout, who passed on some valuable advice on cattle improvement, and Prof. Ls. de G. Fortin, who traced the history of the Association during its fifty years of existence, pointing out some of the ways in which it had helped agriculture in general, and livestock breeding in particular.

Officers elected for the coming year are: President, Antonio Elie; 1st Vice-president, E. Sylvestre; 2nd Vice-president, C. A. Lavallee; Secretary-treasurer, R. P. Sabourin.



Some of the head table guests at the banquet. *Left to right:* Hon. Patrice Tardif, Prof. Fortin, Minister of Agriculture Barre, President Elie, Pro-mayor Gagnon, George Bouchard, Hon. J. Adélarde Godbout.

The Application of the Principles of Heredity to the Improvement of Our Pure Bred Live Stock

An Address

by A. R. Ness

At the Annual Meeting of the Quebec Purebred Livestock Breeders' Association

Everyone believes in inheritance. We can observe the working of inheritance in every day life by the manner in which offspring tends to resemble their parents. It is really astonishing how many of the important characteristics (and many of the unimportant ones as well), that we have observed in their parents appear in the offspring. Furthermore, there is frequently a great resemblance between related individuals and related groups of animals. We, for instance, measure the breeding worth of a particular sire by the uniformity seen in his offspring. As a matter of fact, all of our pure bred breeds are really excellent examples of the manner in which heredity works. If you mate a Belgian mare with a Belgian stallion, you expect to have born a Belgian colt, or if you mate an Ayrshire cow with an Ayrshire bull, you expect to have born an Ayrshire calf, and so it goes with all of the different breeds that have been bred relatively pure for generations. The recognized characters of the breeds are transmitted from one generation to the next with a high degree of regularity.

The manner in which these characters are passed from parent to offspring has been of great interest to man for many generations. It has, however, only been within the past fifty years that man has had a real understanding of the hereditary mechanism within the germ cell.

Although we admit that there are strong resemblances between parent and offspring, we must also admit that there are many cases of closely related animals, even full sisters and full brothers, that in many ways are quite different from one another. These resemblances and variations observed in animals make improvement possible and really make the problem of animal breeding interesting.

The laws of inheritance, as we now know them, can account for the similarities that occur and they can also account for or explain the differences between closely related individuals.

I do not propose, at this time, to go into what may be called the mechanism of inheritance but I would like to point out at least one elementary fact to help clear away a few of the common definitely wrong impressions. One of the first things we must realize is that any new individual, whether it be calf, pig, colt, chick or child, arises from the union of a sperm or male reproductive cell which comes from the sire and an egg or female reproductive cell which comes from the dam.

It should be remembered also that all of the factors that will determine what the new individual will be like, are contained in these two small reproductive cells. Furthermore, what the new individual will be like, is determined

at the time that the male and female reproductive cells come together. This of course takes place approximately at the time of mating.

Fallacies Connected With Animal Breeding

When referring to the relationship of animals, we use very freely the term "blood relationship". As a matter of fact, it is in such common usage that I think we should consider that it has become a part of our language. The term "blood relationship" may be quite misleading and it may have caused some of our breeders to believe that because the new individual is developed and is nurtured within the female of the species, that it takes on more of the characteristics of the mother or dam than of the father or sire. This deduction is, of course, entirely wrong. The sire and the dam exert, on the average, an equal hereditary influence upon the new individual.

Telephony

Some years ago some of the breeders' associations had rules which prohibited the registration of offspring from dams that had previously given birth to cross-bred progeny. The influence upon offspring because of a previous pregnancy is known as "telephony" and because of our knowledge of the mechanism of inheritance, we know that this is not possible. Breeders of dogs are reputed to believe more in "telephony" than breeders of farm animals. As a matter of fact, in recent times very few of our live stock breeders have entertained this erroneous idea.

Maternal Impressions

Maternal impressions relate to a belief that a vivid mental impression of a pregnant dam will have some specific influence on the appearance of the offspring. In the human field, birthmarks on children are often attributed to some incident experienced by the mother during pregnancy. I have even known men to turn a mare that has just been bred so that she can see the stallion, with the idea that this would make the foal look more like the stallion.

Sex Determinations

A number of theories have been advanced by breeders regarding the determination of the sex of prospective offspring. I need not go into these at this time because there is no scientific evidence to support any of these breeding myths or fallacies.

I have mentioned these breeding fallacies merely to make clear in our minds that the factors which determine what a new born individual will be, are contributed by the male and female reproductive cells and furthermore, that this is determined at the time of the union of these two cells which is approximately at mating time.

Heredity and Environment

I suppose at this point a number of you would like to ask about the influence of environment. In other words, what effect has feed, care and exposure upon the new individual? An individual's ultimate attainment in life is not only determined by heredity but by environment as well. Under reasonably normal circumstances, however, the influence of environment is quite small before the individual is born. After birth, as you all so well know, the environmental conditions play a much more important part. Let us turn, for example in this case, to a more mature animal. Take the case of a milking cow whose inheritance has endowed her with the ability to produce 10,000 lbs. of milk. If her feed and general care is not sufficient, she will not be able to produce 10,000 lbs. of milk in a year and therefore, will not be able to attain what her inheritance would allow her to do with enough good feed and proper care. If this same cow had inherited from her parents the ability to produce only 5,000 lbs. of milk, the best food and care possible would not make it possible for her to produce the 10,000 lbs. of milk. It is, therefore, not a question of whether heredity is more important than environment or whether environment is more important than heredity. Both of them are important and must work together for the best results.

Control of Heredity

As live stock breeders, we aim to gain a maximum of control over the inheritance of our animals. We aim to mate our animals having in mind the exercise of such control that only the most desirable characteristics of each parent may be transmitted and that the undesirable characteristics may not be transmitted to the offspring. In practice this is not as simple as it may at first appear. These desirable characteristics, whether they be high milk yield in dairy cows, rapid fattening ability in sheep or beef or hogs, great speed or great power in horses, or heavy wool production in sheep, are all noble ambitions for which we can legitimately select, but the hereditary factors that control such matters in the reproductive cells are so numerous and interlocked, and inter-related with other factors that they cannot be sorted out and dealt with as you would sort out and deal a pack of cards.

Notwithstanding the fact that the passing of characteristics from one generation to the next is, genetically speaking, quite complicated and that we breeders do not have as much control as we would like, we do know that the mechanism of inheritance follows a very definite plan in the reproductive cells. From experience, we know also that by selecting or choosing those animals with the greatest number of desirable characteristics and mating them together, we can effect improvement in our live stock. This practice, known as selection, implies the culling out and the removal from breeding operations, so that they do not reproduce themselves, of those animals with undesirable characteristics. To overcome some of the shortcomings of

selection and culling, it has been shown to be absolutely necessary to cull and select continuously. I feel that by this method much has been accomplished in the past and that we can still make progress in the improvement of our animals in the future by the use of selection. Selection has certain peculiar features:—

1. We know that animals do not always reproduce as they appear themselves.
2. Our standards may not be high enough.
- or
3. We may not have complete enough data upon which to judge or select wisely.

When we decide that one calf will be sold as veal and that another will be raised and allowed to perpetuate its kind, we are making a decision which may have far-reaching effects in our breeding programme.

Let me cite an example of two dairy cows:—

COW No. 1	COW No. 2
78 lbs. milk best day	45 lbs. milk best day
Test 3.7%	Test 4.2%
8860 lbs. milk in year	8860 lbs. of milk in year
Dry in 250 days	Milked 305 days
Type "V.G."	Type "Good"
Hard to get in calf	Regular breeder
OFFSPRING	
Very typy	Plain
Poor milkers	Good milkers
Low testers	Average testers

What would likely happen if a man selected, as a herd sire, a son of Cow No. 1 on the strength of the evidence that she could produce 78 lbs. of milk in one day? He would of course, if he were sane, only make that decision in the absence of the other facts about Cow No. 1. Therein lies the greatest weakness in our application of the principles of selection. Altogether too many sires, and cows as well, are chosen upon just as slim evidence and yet we wonder why we have all experienced so many disappointments in our animal breeding endeavours.

Sires Important

The most rapid improvement in our herds and flocks can be made through the use of good sires. To be certain that the sires we select are as good or as pure for the characters we want is the problem. It is a problem that takes time, sound judgment, proper management and careful planning.

It might be advisable at this point to confine our attention to the field of dairy cattle and review some of the agencies that have been set up to assist us to secure the fundamental evidence so that we can select wisely.

R.O.P.

The testing of cows in the R.O.P. has made it possible to know our high producers and high testers from our low producers and low testers. The R.O.P. has caused breeders to keep more accurate breeding records. This information is excellent evidence upon which to base selection. It makes possible the establishing of important cow families which in the case of individual matings are just as important as

an outstanding sire because the sire and the dam on the average exert an equal hereditary influence.

Much more information would be available if a greater number of our pure bred cows were tested on the R.O.P. and tested not only once but annually. We learn so much more about our own cows when we must watch carefully how they do their work. Life-time records are playing an important role today and will probably assume greater significance in the future. The real evidence on the breeding ability of a sire would be forthcoming if all of his daughters were tested on the R.O.P. We would then be able to see the whole picture instead of judging a bull on a few of his best daughters. That actually is the fundamental reason for certain of the breeders' associations recommending that in the R.O.P. all cows in the herd should be required to go on test.

We all speak lightly about a "proven bull" but what is a proven bull? What standards do we have in our minds as to what constitutes a proven bull and how can we have proven bulls unless we possess complete information on all of his daughters and sons, not only about milk and fat production but about their type and breeding and feeding ability as well?

Type Classification

Herd type classification has been introduced quite recently so the animals can be given a rating on type (which of course includes size, development, proportion, constitution, etc.) as well as R.O.P. rating. The cumulative results of type classification will be valuable but the greatest significance will come only if it is coupled with record of production.

Inbreeding

After a number of generations of wise selection and rigorous culling, we can reasonably consider that our animals are, as it were, more pure, at least more pure for the characters for which we have been selecting. Once this state is reached, it might be wise to consider the use of close or inbreeding in order to intensify these desirable characters further.

It must be remembered that inbreeding will intensify undesirable as well as desirable qualities and therefore, is best employed only in the case of outstanding individuals or herds. It can with safety be employed under proper circumstances with good results.

Advanced Registration

Advanced registration for dairy bulls was adopted for the purpose of making it possible for breeders to select sires with some record and type backing. Most of you are familiar with the minimum requirements for Class A, Class AA or Class X and Class XX bulls so that they need not be repeated. It should be observed, however, that for these two classes of bulls the requirements are based upon the records of their ancestors. In the case of the Preferential Class for bulls, 1 Star, 2 Star and 3 Star and the Extra bulls, the requirements are based upon the records of

their progeny. There is a great distinction between the two types of requirements because how an animal will breed is best told through the progeny.

I realize, as well as anyone, that all breeders should not be looking for sires that have been proven through their progeny. In the first place there would not be enough for everyone and in the second place many of the breeders are not in a position to handle these older bulls. When young bulls of the A or X Class are chosen, however, we should make sure that the sire of the young bull and, if possible, the sire of his dam are of the Preferential or Extra Class. If the daughters of these sires that have been bought young are put on the R.O.P. and classified for type when they come into milk, it would be astonishing how quickly we would accumulate the kind of information required to be able to pick the worthy from the unworthy bulls.

According to figures published in Washington, 22% of all of the cows and heifers on Dairy Herd Improvement Association work in the United States, are removed from the herds annually. Of these one-fifth are discarded because of low production. Doubtless some of these cows were low producers because of circumstances other than inheritance. There is a strong indication, however, that if they had been sired by better bulls and out of better cows, more of them would have been profitable producers.

Artificial Insemination

Artificial insemination, although *not* new, has grown in importance and has greatly increased in practice on this continent in recent years. Its main purpose is to make more widespread use of better sires and thereby raise the average milk production of our milk cows. It cannot be considered as a cure for all of our present breeding and sire difficulties. Units have been organized in several different ways and found to function successfully. In some cases these units have been organized on a co-operative basis, in others they have been organized with government assistance and it is quite frequently practised by individual breeders. Artificial insemination must be organized and operated carefully and is most likely to be successful in a community where there are a large number of cows in a relatively small area, good roads, adequate telephone service and where the farmers are prepared to feed and raise their young stock and feed their cows in milk well enough to benefit by the better inheritance in their cattle.

The agencies that have been reviewed are only a few of those organized to assist in the improvement of our pure bred live stock through the application of the principles of heredity. They are practically all in operation upon a purely optional basis, although in Herd Type Classification, there is the start of selective registration. It is quite possible the selective registration may, in the future, assume greater importance in at least some of our breeds.

The pure bred live stock industry in this country has a bright future. We, however, must plan for constant progress by establishing high standards and high ideals.

Sherbrooke Fair Prize Lists Increased

Beef cattle classes at the Sherbrooke Fair, to be held August 25 to September 1, will be open to exhibitors from any part of the Province of Quebec this year. The Provincial Exhibition at Quebec has no provision for beef cattle classes, and in consequence a large number of entries are expected to be out at Sherbrooke in the Shorthorn, Hereford and Angus breeds.

Classes for dairy cattle, Ayrshires, Holsteins, Canadians and Jerseys, will be restricted to exhibitors from the Eastern Townships only, and an increase in the prize list is expected to bring back many former exhibitors who did not come out to last year's fair, the first that has been held since 1940.

The prize list has also been increased for heavy horses, especially in the harness classes and an extra class has been opened for commercial firms exhibiting teams and singles. Commercial horses will be barred from the regular section.

In the poultry classes a revision has been made and a new section has been added for the "utility" breeds: Plymouth Rock, New Hampshires, Wyandottes, Leghorns and Rhode Islands. In this section the birds will be judged more from their general utility standard than from appearance. Revisions have also been made in the prize lists for fall crops, vegetables, flowers, fruits, and in the cooking and sewing sections. In the maple products section is a place for producers who have never shown at Sherbrooke.

Fighting T.B. in Cattle

The Federal Government has proclaimed the counties of Rimouski, Matance, Matapedia, Bonaventure, Gaspé and l'Islet a "reserved zone" and all cattle owned by farmers in these counties will be subject to the tuberculin test. All reactors found will be removed from the herds.

Bovine tuberculosis is a serious disease among cattle, and is also a menace to human health. Drastic measures are necessary to keep it under control.



Dr. Vignault, Secretary of the Three Rivers Fair and for many years inspector of stallions, is presented with a silver-headed walking stick to mark 25 years of service to the horse-breeding industry.

Notable Record For This Calf Club

When the Ormstown Boys' and Girls' Calf club was first organized in 1936 it had 23 members. Of the 78 members who have completed at least one-year's project, 58 are still farming and one is in the employ of the Department of Agriculture. Nine boys are now in the armed forces, eight girls and two boys have left the farm for the city. Three of the girls are nursing and three are teaching. Three boys have taken the diploma course and one the B.Sc. course at Macdonald College and one has taken the agricultural course at Ste. Martine Agricultural School.

Of the 78 members 61 were boys and 17 were girls. Only two boys have actually left the farm to take up work other than agriculture. Five members now own their own farms, 35 are running the home farm with their parents. One is a farm manager and 17 younger members are working at home and attending school.

Naturally the club is proud of this record and appreciates the influence of Boys' and Girls' clubs as an agency in helping farm boys and girls towards a fuller life and better citizenship.

There are now 2,545 boys' and girls' farm clubs in Canada with a total membership of 34,471 under the Canadian Council on Boys' and Girls' Club Work.

Plant Protection Charts Are Ready

Farmers are all familiar with the Department's charts which show control methods against insects and plant diseases. The three which have been published in the past refer to orchard spraying, protection of vegetables and protection of potatoes.

A fourth chart has been added to the list which deals with disinfecting of seed grain before sowing. In spite of all the efforts which have been made in past years to encourage a more general disinfection of seed grain before it is sown, the losses which occur as a consequence of seed-borne diseases is still alarmingly high. Field surveys have revealed oat fields in which half the plants were infected with smut, for example. The seed from which these fields were grown had not been disinfected before it was sown, or, if it had been, it had not been done properly.

This new "Guide to the protection of cereals" is printed on heavy paper so that it can be nailed up somewhere where everyone can see it and study it easily. It (and the others too) can be obtained from your agronomist, or from the Division of Information and Research at Quebec. Even if you always disinfect your grain before sowing it, get a copy just the same and hang it up where your children and your neighbours can see it. They may not be as well informed on the subject as you are.

Two lovers walking down the street—
She trips, he murmurs, "Careful, sweet!"
Now wed, they walk the self-same street,
She trips, he growls, "Pick up your feet!"

Strippings

by Gordon W. Geddes

I hate to do it but I just gotta make a little noise about the 'Noises of a Sugar-camp' as broadcast the other night. The interview was O.K. but the noises sounded as if they were picked by a city man. He should have given the Moultons free rein to ad lib the noises. I'll bet Archie wanted to step on the dog's tail or splash a little hot sap on the interviewer to inject a bit of noise. If sugaring really was that quiet the trees would be bored by something more deadly than a tapping bit. Too bad they couldn't have broadcast the sounds made by the farmers when rationing of maple products started. Of course, though, this was a very dull sugar season so maybe that was the trouble.

In fact, spring is still dull and the weather man can't make up his mind whether to have an early spring or a late one. Neither can the farmers decide whether to sow or not to sow. Some are not wondering as they aren't ready for seeding and it is unusual for even the early-birds to have to hesitate when the seeder could be running. Ontario doesn't seem to feel that way, they plant whenever the ground is ready but April seeding seems pretty radical to us. At least, it is a pleasant feeling to have the seed and fertilizer all at hand and some harrowing done. But not so pleasant to see the new growth of clover freezing off.

When the Film Board Show came round again Robert Taylor was back with us. Guess the early freeze affected him too. The film 'Harvests for Tomorrow' had a lot of meat in it if there were only more people chewing on it. City people must be brought to realize that they too live by the land and that their prosperity also depends on the top six inches of soil. The farmer alone cannot build up soil fertility with economic conditions against him. Everyone in the nation and in the world is in the front line for eventually we must all starve or eat together. In our local discussion the suggestion was

advanced that the farmers should forget about profits and farm because they loved the job. But do the women love the husband who is a poor provider or the one who brings home the bacon? A few stand by the former but they get as lean and tough in the process as the old-timer in the film. It is much easier to love farming on a full stomach though anytime the city folks start working for the love of their jobs, the farmers will match them.

The first crop of calves is coming along from the sires of the E. T. Artificial Breeding Center. They're a nice bunch of Jerseys but why wouldn't they be? I've been waiting for pictures of some of the offspring to tell you about it. Maybe it won't be long now. Anyway, I feel sure that it saved a good heifer from the butcher for me. I'm sure she would never have bred naturally but she did give me a test-tube calf. One of our heifer calves grew up with a twisted ankle. Stanley says she looks as if she had a bent caster which is a pretty good description of her. The veterinarian who came for the blood-test under the Provincial system, said she must have broken her ankle.

Speaking of 'vets' it looks as if the province of New Brunswick was going to give the other provinces something to live up to in the way of veterinary service to the farmers. Of course, we have services available here that many of the farmers never use but it will always be that way. Those who would use them would like to see the N.B. example copied more closely.

We've been trying to get a bulldozer into the neighbourhood to do some pasture work but I'm afraid it can't be done this year. Of course they are beginning to talk that the bull-dozer is antiquated for that type of work now since it wastes too much top-soil. However, there are a good many acres around here that have no top-soil if we judge by what is growing on them. The sooner we get rid of that trash and start to build a top-soil, the sooner something useful will grow. We are seeding a piece for pasture with a pasture mixture and using plenty of manure and

fertilizer and hope it will be more permanent than our last attempt.



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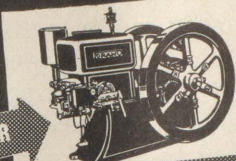
The appraisal season for valuing farms for loans from the CANADIAN FARM LOAN BOARD, has already started.

Requests in view of applications for loans and explanatory literature should be made to the undersigned—

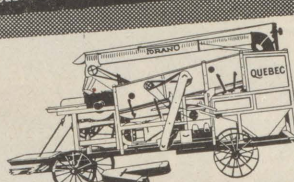
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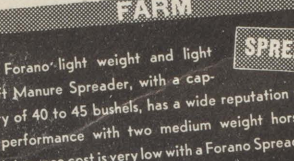


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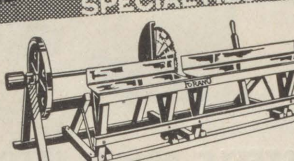


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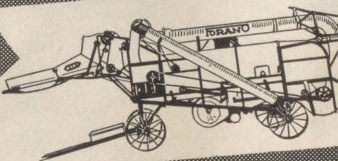


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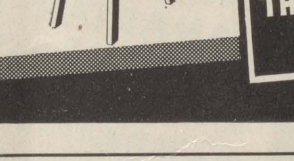


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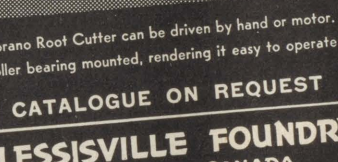


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The Forano All-Steel Thresher is our pride. Customers like it for three reasons: Firstly, for its particularly good performance, quality and quantity; secondly, because it is a well built machine; thirdly, because it has a good appearance.



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THRESHER

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THE PLESSISVILLE FOUNDRY

PLESSISVILLE P.Q. CANADA

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livered last year; but the British are prepared to accept even greater quantities of eggs than are covered by the contract if it is possible for us to ship them."

Farmer, Save That Cockerel Chick!

There's going to be a market — and floor prices — for every pound of Grade A and Grade B poultry meat that can be raised this year. Reason? Canada has arranged to supply to the U.S. Army her surplus up to 30 million pounds — that's a lot of cheepers. Prices have been agreed upon as follows: Grade A milk-fed — 30c per lb.; Grade A — 28c; Grade B milk-fed — 28c; Grade B — 26c; Grade C (4 lbs. and up) — 20c.

So pamper your little peckers this year to help them "make the grade". Don't destroy your cockerel chicks — there's profit in every pound.

Canada's 1945 crop of maple products is only 20 to 25 per cent of normal. This is the initial estimate of the crop by the Dominion Department of Agriculture.

Less sap was gathered this year than at any time in the past 15 years. The poor sap run was attributed to the lack of frost in the ground and to the record spell of warm weather striking Central Canada late in March.

As evidence of the reduced 1945 output, one maple syrup packer who last year put up 44,000 gallons, 4,000 from Ontario and 40,000 from Quebec, obtained this year only 5,000 gallons — 1,000 from Ontario and 4,000 from Quebec.

Naturally there are no marketing difficulties in disposing of this year's notably small crop. It is practically all sold now, most of it direct from producer to consumer.

Before planting potatoes, strawberries, or corn in sod land of the previous year, the soil should be examined to make sure it is not infested with white grubs.

Food Agreements For 1946 Signed

In the House of Commons on April 4th, Hon. J. G. Gardiner, Dominion Minister of Agriculture said — "Yesterday Colonel Llewellyn, the British Minister of Food, and I signed three contracts. The first was for the delivery of all possible quantities of bacon and ham for the year 1946. A contract is in existence now for the delivery of all possible bacon and ham for 1945.

"We also signed a contract for the delivery of all possible quantities of beef to Great Britain during 1946. A

contract is in existence already for 1945 providing for a minimum quantity of fifty millions pounds of beef. A maximum quantity is also set out in the contract, but there is on file a cable received from the British Ministry of Food last summer indicating that they were prepared to take under that contract all the beef they could obtain from Canada, so that in effect there is no maximum quantity under the contract for 1945.

"The other contract which was signed yesterday covers eggs, and is for quantities somewhat greater than we de-

Small Farm Flocks Cause Sheep Decline

"It is my opinion that the very thought of having a small flock of sheep on every farm because it requires little attention or work and little feed has been the reason for the decline in the number of sheep in Eastern Canada. The idea is not economically sound" said Dr. E. S. Archibald, Director, Dominion Experimental Farms Service, in a recent address to the Canadian Co-operative Wool Growers at their annual meeting at Toronto. Sheep, he said fitted into the agricultural program best in an organized manner. They had a definite place in relationship to soil, climate and proximity to markets; and the percentage of sub-marginal land that could be put on a revenue producing basis could be done better by sheep than with other classes of live stock. Those small flocks on every farm invariably led to indiscriminate distribution of sheep under unfavourable conditions of soil and feeds, and to indiscriminate breeding which, in turn, produced grade variation in quality of lamb and wool.

Also, through the fallacious idea that sheep require no care or labour, uncleaned wool, improper shearing, and all other like factors helped to destroy the choice source of revenue that wool provides. The small flock was not given adequate quarters, properly balanced rations, sufficiently good rams, modern shearing equipment, the proper finishing of lambs, nor the proper care of wool that the best interests of the sheep industry demanded.

The trends in Western Canada, said Dr. Archibald, were definitely in favour of the small flocks being co-ordinated for the grazing season and for shearing and marketing of both lamb and wool through co-operative effort into larger flocks, thus overcoming all the handicaps of indifference and neglect so customary in small scattered flocks. That same type of organization could easily be adapted to various parts of Eastern Canada for the breeding season, in the use of rams for community pastures, for the shearing season, the co-operative selling of wool, and the co-operative finishing and selling of well finished lamb and mutton.



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tells how you can build the Buck Rake shown above. Write for copy to Advertising Department, Imperial Oil Limited, 56 Church St., Toronto, Ont. Ask for booklet on "Buck Rakes".



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THE WOMEN'S INSTITUTES SECTION

*Devoted to the activities of the Quebec Institutes
and to matters of interest to them*

Shortages in Commodities Explained

by Mrs. Cameron E. Dow

Cotton Goods. Mothers of school children will find it a bit harder this spring to get good serviceable prints for those bright spring dresses so dear to the hearts of mothers and daughters alike.

The reason for this is that thousands of yards of heavy duck and drill are required for warfare in the far East, as well as Australia and the south sea islands. Jungle rot takes terrific toll of cotton goods. Some of the uniforms have to be replaced within three weeks of landing. A vast percentage of cotton yarns are being used for this.

All fighting equipment such as guns, gun powder, Piats, Brens, hand grenades, everything that goes to war 'below the Southern Cross' must be wrapped in specially treated cotton fabric to ensure it against mildew and jungle rot, as well as corrosion caused by dampness.

Conservation of all clothing materials is still an urgent wartime necessity. Cottons especially, this year.

Boys returning from overseas are bringing back stories of food shortages that burn our hearts. F/O David Chance of Ottawa could hardly eat his breakfast the morning of his arrival he was so aghast at what his mother put before him.

"Just imagine" he said "bacon and *real* eggs, butter marmalade, grapefruit. Am I really awake or is this just another of those super-dreams we used to have overseas".

Syd Parks of Winnipeg, writing from Holland says — one thing above all I will take back home with me is a real appreciation of Canada. This isn't just loyalty, but a feeling of what it really means to be a Canadian and the value 'of living back home'".

Mme Benichon of Toulouse, France who came to Canada in March direct from the French Underground said "France has forgotten to eat, we've lived so long without fats of any kind that now our stomachs won't take them, we get sick".

Stockings are still in the news, and women are still wondering why they can't get more.

When Canadian boys crossed the Rhine thousands of them went in the fast way, by glider and 'chute. Not only that, but most of their supplies went in the easy way also.

Here are a few. Jeeps and anti-tank guns. The 'chutes for these are a tremendous size, being sixty feet in diameter. They contain a quarter mile of nylon and art silk

fabric and about four-fifths of a mile of woven nylon cord for a tow-rope. Each jeep requires *four* of these 'chutes to bring it down.

Although these giant-sized 'chutes are made in England, most of the rayon and nylon is made right here in Canada.

Donald Gordon speaking before the Women's Canadian Club of Toronto in March again put before them the importance of preventing an inflationary rise in prices.

"At this state" he warned them "price control assumes its greatest importance, for it was in the period immediately after the last war that prices skyrocketed before crashing into the great depression".

"Effective control in the reconversion period offers the best guarantee of employment by keeping prices where they will build up domestic and export markets".

Last of all I would like to say that we women face a long and strenuous summer. Hard work goes hand in hand with people on farms. Backaches are a heritage of summer — as well as roses.

Food will be needed in tremendous quantities for Europe in order that these unfortunate ones "shall not perish from the earth". Millions of children have known nothing but hunger and war. It will be Canada's deep honour to save them from starvation. You can't build a new world on misery and want. *We must feed them.*

New Demonstrator Appointed



Miss Evelyn Walker of Summerside, P.E.I. has been appointed to the position of Demonstrator-Secretary to the Quebec Women's Institutes, to succeed Miss Barbara Fletcher. Miss Walker is a recent graduate in Household Science from Acadia University, and began her new duties April first.

Try Something New!

by F. Grace Yates

With the production and conservation of food more important than ever, now that the liberated peoples of the European countries must be fed, it goes without saying that the greater part of the garden will be given over to the old "tried and true" reliables — the tomatoes, carrots, beets, etc., which are the backbone of every planting. Even so, gardeners would do well to reserve a small corner in which to try out a few of the less familiar vegetables. Variety adds spice to the dulllest menu, and the cook who can introduce some tasty new dish now and then, need never fear that her meals will become monotonous. A crisp green salad, for instance — made up of something besides the greatly overworked lettuce and cabbage — will never fail to bring forth an enthusiastic welcome from a hungry family. And how the youngsters will rejoice in a change from the usual spinach or chard!

And what are some of these vegetables which are not usually found in the average garden? There are many, but one of the best, certainly, is Kohl Rabi, a special treat for all who admit to a fondness for turnips. The edible part is the round, bulbous swelling which forms just above the ground. It has a delicious, sweet, turnip-like flavor and should be used when young, about the size of an egg. For a continuous supply, seed should be sown every two weeks up to the middle of July. It is ready for use in about 60 days and is available long before turnips are fit for the table. Plants will flourish in almost any soil and should be thinned to 4 to 6 inches apart.

Broccoli is much like cauliflower in habit and growth, but far hardier and easier to grow. The variety Improved Calabrese forms a compact central head of bluish green flower buds, resembling a loose head of cauliflower. After the main head is cut, the side branches continue to develop. It is cooked and served much like asparagus and combines the flavor of that vegetable with cauliflower. If at all possible, it should be given an early start in a cold frame.

While spinach is delicious when used while young, it has the annoying habit of bolting to seed almost overnight. Not so, however, the variety New Zealand, a perpetual growing plant which is drought resistant and absolutely undemanding as to soil. The plants are large and throw out new branches during the entire summer. Germination is very slow and it is well to soak the seed in warm water for 24 hours before sowing, and then mark the rows with a few radish seeds.

Kale, too, is excellent for use as greens. The richly curled, deep green leaves are frost resistant and can be used until very late in the fall. Indeed, if the location is marked, it can be dug out of the snow on a mild day in winter, thawed out in a pan of cold water, and then cooked in the same manner as if it were fresh. There are two varieties, the Tall Scotch Curled, reaching a height of 3 feet and the Dwarf Curled; the latter is, perhaps, the most satisfactory.

For a small, quick, green salad plant, nothing can be better than the little-known Corn Salad. Leaves are small and of a delicate flavor and it comes into use in 55 to 60 days.

Chinese Celery Cabbage is now on sale at most markets during the autumn months but it is still all too seldom seen in the farm garden. As a salad green it rates the highest praise, possessing a delicious flavor, a blend of celery and cabbage. Seed should be sown in July and thinned to 8 or 10 inches between the plants. It will provide well blanched, tender heads late into the fall and can be lifted and stored in the cellar in the same manner as cabbage, where it will keep until Christmas. Here, too, the gardener has a choice between the tall, 18 to 20 inch Chihli, or the 10 inch Wong Bok.

Broad beans are extensively grown in England but in Canadian gardens they have never attained the popularity which their merits deserve. As a shell bean, no other variety can equal their flavor. The immense flat beans should be planted carefully, edgewise, with the eye down. They differ from others of their family in that they do not mind cold and can be planted as early as the ground can be worked.

The Mary Stewart Collect

A note on the origin of this prayer was recently sent to the Journal by Mrs. R. F. Kelso of Ste. Anne de Bellevue. The Collect is used by Women's Institutes the world over, and by many other women's organizations as well.

"Miss Stewart, who has recently died, wrote the prayer for use in a women's club at Longmount, Col., in 1904. She had a distinguished career in the field of Indian Education, serving for years as superintendent and director of Indian Education in the Department of the Interior."

"Keep us, O God, from pettiness; Let us be large in thought, in word, in deed.

"Let us be done with fault-finding and leave off self-seeking.

"May we put away all pretense and meet each other face to face — without self-pity and without prejudice.

"May we never be hasty in judgment and always generous.

"Let us take time for all things; make us to grow calm, serene, gentle.

"Teach us to put into action our better impulses, straightforward and unafraid.

"Grant that we may realize it is the little things that create differences, that in the big things of life we are at one.

"And may we strive to touch and know the great, common human heart of us all, and, O Lord God, let us not forget to be kind!"

Q.W.I. Notes

Argenteuil County. Brownsburg Branch held an apron parade, followed by a Dutch auction and heard a talk on the duties of Institute officers and conveners. The Branch at Mille Isles paid their membership to the A.C. W.W. Morin Heights raised \$18.90 at a social evening, for the treasury, and filled an emergency kit for the school. The sum of \$5. was donated to the Children's Memorial Hospital. A Parent-Teacher's Association was formed, and members joined the Hospitalization Plan. Other items on the day's programme included a discussion on eggs and their uses, an auction of home-cooking which netted \$5., and the completion of a patchwork quilt. In Pioneer Branch Mrs. Matthews gave an instructive paper on agriculture and conducted a true or false contest and horticulture was also discussed. This Branch has accepted the Blue Cross Service.

Bonaventure County. New Carlisle and New Richmond both held rummage sales realizing \$80. and \$38. respectively.

Chateaugay County. Aubrey-Riverfield Branch had an address by Dr. Langis of St. Martin's on the work of the County Health Unit. Rationing was discussed and agreed upon as necessary and valuable. Dundee had a lengthy discussion as to the comparative influence of the home and school on child life. Agriculture and its various phases were discussed, and all departments reported and interestingly commented on. Franklin Centre had a discussion on cotton, its cultivation and processing. A paper on 'house-keeping a century ago' was a feature of the programme. The meeting at Howick took the form of a Red Cross quilting party, with a short business meeting during which Canadian industries and handicrafts were discussed.

Compton County. Brookbury Branch presented gifts to local children and sent flowers for a funeral, and comforts to sick ones in the community. The resume of the year's activities given at Bury meeting showed that much good work had been accomplished by this Branch. Canterbury discussed salvaging of paper as a way of assisting the war effort, and heard a talk on nutrition. A sale held at the meeting netted \$5.39. Prizes were offered in Cookshire High School by the Branch there in the upper Grades.

Gatineau County. Aylmer East had an address on the present school system by Mr. Todd of Hull, and another on Attitudes of Teachers and Teaching by Mr. Hantin of Aylmer East High School. Cardley distributed Kitchen Health Charts. Wakefield decided on exhibits for a Handicrafts show to be held in June. An interesting paper on the growing of potatoes was given by Mrs. Vaillancourt. This Branch sponsored a blood clinic held in the school auditorium. The Wright Branch transacted only Annual-meeting business.

Megantic County. Lemesurier Branch made plans for a social evening, and sent cards and flowers to the sick. Inverness presented a Life-Membership to Mrs. Alex. Watson, the only remaining charter member of the Branch. The gift was presented by Mrs. Wilson Beatty.

Mississquoi County. St. Armand discussed the planting of flowers, and held a contest at the meeting.

Papineau County. Lochaber Branch had reports of the year's work and answered the roll-call with the name of the member's birth-place.

Pontiac County. The Bristol Busy Bees bought new table linen for the Church as an act of appreciation for being allowed to hold their meetings in the church basement. Quilts were presented to members who were leaving the community. Clarendon held its annual meeting in the form of quilting, taking time for the necessary business. Elmside presented a quilt to the minister's wife, who was leaving. The making of life preservers from milkweed was described. Other subjects discussed were schools in the country in comparison with city schools; life on the modern farm, and first aid. Stark's Corners prepared a quilt for finishing, and held a spelling school. In addition to annual meeting business Wyman Branch had a musical program and readings from Edgar Guest's poems.

Quebec County. Valcartier Branch held a social evening which netted \$12. for the Branch funds. The Blue Cross Plan of hospitalization was discussed.

Richmond County. Gore Branch rounded out the year's work and made plans for the coming year. The Blue Cross Plan has been accepted by this Branch. Melbourne Ridge held a contest with prizes, and sent out two sunshine baskets to convalescents. Several quilts have been made during the winter months in the Branch. Shipton Branch sponsored a home-nursing class with good success, and carried on a School Fair. Much interest is shown in the Blue Cross Hospitalization service. Windsor sent cut flowers to a sick member and gifts to new babies. A home-and-school Council was organized by the Institute.

Shefford County. Granby-Hill Branch discussed medical superstitions which should be exterminated, at the meeting, and considered plans for raising funds. A reading, "Short on Frills, Long on Value" was given at the South Roxton meeting, and the saving effected by accurate measuring discussed. A food sale was a feature of the meeting. Undaunted by the loss of two members by death, or by the long winter which made meeting difficult, the Branch at Warden has rallied and at its last meeting doubled its membership. The sick and shut-ins were not forgotten, and flowers and fruit were sent to several. An interesting discussion on the cooking of meats featured the meeting, and at the next plans to entertain a war bride are to be carried out.

Sherbrooke County. Ascot Branch has adopted the Blue Cross Plan. At the last meeting the Secretary, Mrs. N. L. Cameron, was presented with a gift of Pyrex dishes in recognition of her services as secretary, and was returned to office for the twenty-second year. The treasurer, Mrs. W. Mitchell, was presented with a similar gift on her return to office for the sixth consecutive year. Cherry River made a donation of \$5. to the local cemetery fund. Sunshine baskets and fruit for the sick were reported and a handkerchief sale held. Orford had a thrift exhibit of women and children's clothes made from cotton bags.

Stanstead County. Ayer's Cliff members have completed a busy winter's work, during which hot school lunches were served to over forty school children. A donation of \$10. was made to the Boy Scouts, and the Branch co-operated in holding a community party with the Odd-fellows. Prizes were given in a local essay contest, four of the best going to compete for a county-prize. Prizes were also given to Grades eight and nine, and a former President remembered with a gift as she left town. A paper on nutrition was given by the Provincial Convener of Home Economics. Beebe sponsored a diphtheria-immunization clinic where one hundred children were inoculated. This clinic was arranged by the convener of Child Welfare, who assisted the doctor and nurses. An address by Rev. Mr. Lovelace on "The Acts of Civil Status" was on the day's programme. This Branch sponsors the local Girl Guides under the leadership of Miss Cass. A "Baby Basket" is owned by the Branch, which keeps it supplied with all necessary articles needed in emergencies and loans it as required. North Hatley Branch had a large majority in favour of the Blue Cross Plan. Co-operation between parent and teacher was discussed at the meeting. Pupils in the local school entered the County Contest in essays sponsored by the County W. I. Plans were made for the annual jumble sale in the early summer. Minton Branch held a word contest. Readings from W. I. News were given. Tomifobia has again succeeded in placing their community on a National Film Board circuit. A successful film showing was the result, held in the community hall. A discussion on Family Allowances took place, the Branch agreeing that some way must be found to ensure that the money will be used for the purpose for which it is intended. Stanstead North sent Easter cards to shut-in, a kitchen shower to a war bride, and remembered a sick lady with a gift. Way's Mills planned for a presentation of a Memorial and Honour Roll to the Hall Trustees. Plans were also made for a Remake Revue to be held in May.

Many of the Branches have reported new members this month, proving that Institute work is not losing its influence, despite the great press of other duties and responsibilities.

Women as Magazine Readers

by M. Elizabeth McCurdy

Difficult economic conditions, war news, political crises, all have affected adversely the demand for magazines, as readers have turned their attention to newspapers dealing with these subjects.

It has long been a truism in the world of periodical publications that magazines are largely bought by women readers. It has also been noted that the most outstanding in magazines published in recent years have been those which have a direct appeal to women readers. These popular women's magazines have prospered largely at the expense of others which make a more general appeal. One source of profit peculiar to the publishers of women's magazines is that they draw a greater volume of advertisements than any other, because women are the world's greatest buyers.

Magazines which direct their appeal to women readers use articles on housing, interior decoration and furnishing, with illustrations to increase the attraction. Labour-saving devices and needle-craft offer good topics for these articles. Fashions offer opportunities only to the expert. The same may be said of dress-making, and of cooking recipes, canning and such subjects as only an expert can safely deal with.

Developments in careers of women as workers, in child welfare, hygiene and nutrition are often used as subjects for articles to be used in magazines which appeal to women.

The interest in women's magazines is not confined to immediate surroundings. More and more women are giving attention to world affairs and to happenings outside their own countries. Politics and science, too, have aspect which appeal to women readers who may not have the knowledge of the specialist yet have interests ranging from the trivial to the profound, and who find in the pages of magazines material which whets curiosity and satisfies interest.

Magazines in which the space is almost entirely devoted to pictures are favorites with many people who can hardly be called readers, since the pictures almost entirely supplant reading matter, without taking its place. It appears to be rather a superficial method of gaining knowledge, and one which fades out of the mind very quickly, leaving little impression.

For people whose time for reading is limited, too much cannot be said in favour of the Digests which are a feature of modern literature. The views of leaders of thought in many lines are summed up in terse articles of readable length even for those who have very little time to read. The very fact that these articles appear in the Digests proves their value, since only the most worth-while are used. Dealing as they do with timely topics and current issues the Digests will keep readers informed and up-to-date on subjects which would otherwise present little attraction.

The Spring Wild-flower Garden

by Dorothy E. Swales

Illustrations by W. E. Whitehead

Wild flowers have a definite place in every attractive home garden. They provide colour before the standard perennials, such as iris, peony and delphinium come out, and while annuals such as petunia and zinnia are still in the seedling stage. True, bulbs like snow-drops, crocuses and daffodils flower about the same time as the first attractive wild flowers, but bulbs are hard to get in war-time, and at all times are expensive to buy. Masses of bloom can be provided by flowers transplanted from your local woods at no cost but your own time. They may be mixed with small cultivated perennials such as lily-of-the-valley, and sweet-scented English violets, but not with big perennials which would soon dominate the weaker-growing wild flowers.

In almost every garden there is a shady spot not desirable for annual flowers and this may be used most effectively for your wild flower garden. These plants come from the woods and prefer the shade of trees during the summer, even though they love bright sunshine in the spring to stimulate the opening of their flowers.

The wild flowers to be recommended are the very early-flowering ones. A succession of later flowering ones could be used as well, of course, but as a whole our popular annuals provide better colour for summer and fall bloom than do our wild plants. For the average person, then, it is advisable to concentrate on getting a good display of bloom from about April 21 to the end of May from plants transplanted to the garden from the local woods.

Spring is heralded in the Montreal area by the flower-

ing of the Hepatica, Bloodroot, Spring Beauty and Wild Ginger. This year the Hepaticas were fully out in my garden on March 26 and in the woods several days later, but ordinarily, they come out between April 15 and April 30 according to the earliness or lateness of the spring. These four are followed by the Bellwort, Dog's Tooth Violet, Red Trillium, Canada Violet (white, with leafy stem) and Yellow Violet. While the Bellwort is still in full beauty, the White Trillium, Dutchman's Breeches, Squirrel Corn and Blue Violets come out. Then follow the Twisted Stalk, Solomon's Seal, Painted Trillium and wild Lily-of-the-Valley. There are a number of other flowers available as well during this period, but the above selection have been used freely and very successfully in this district in home gardens, and will provide a succession of bloom from about the middle of April until the end of May.

The Hepatica (Fig. 2), unfortunately, is confined to the woods of the western and southern part of Quebec Province, but it is available there in white as well as beautiful shades of mauve and blue. It transplants readily and produces a splendid effect in masses. The Bloodroot, Spring Beauty (Fig. 1) and Wild Ginger (Fig. 3) are more general in their distribution in the province and are well worth transplanting. The Spring Beauty is small, just about seven inches high, but its sweetly scented, pink-veined flowers make it worth including. The Bloodroot has a fairly large solitary white flower, pretty, but perishing quickly, so it is grown mainly for its cool-looking grey-green leaves. Its



Some of the wild flowers which can easily be transplanted into the home garden.

1. Large white flower, Bloodroot: small flower, Spring Beauty. 2. Hepatica. 3. Wild Ginger. 4. Fiddle-heads of Cinnamon Fern. 5. White Trillium. 6. Dutchman's Breeches.

sap is a bright orange colour and is used by the Indians as a source of dye. The Wild Ginger has an inconspicuous brownish-purple flower, a stem strongly scented of ginger, and large kidney-shaped leaves (4"-6" in diameter). The leaves provide an attractive oasis of dark green for the eye on a hot summer's day.

Two of the most striking wild flowers of the Montreal region and the lower Ottawa are the White Trillium (Fig. 5) and the Bellwort (with drooping yellow flowers). The Painted Trillium, with purple stripes at the base of each white petal, dominates in the Laurentians, and the Red, or ill-scented one is quite general except in the cold north and east parts of Quebec. The Bellwort and various Trilliums all flourish under cultivation, and are particularly recommended for the home garden.

Dutchman's Breeches (Fig. 6) and Squirrel Corn come up from a scaly pink bulb and little yellow tubers respectively, and have very similar feathery leaves and odd attractive flowers, tinged with yellow in the first and purple in the second. They are closely related to the cultivated Bleeding Heart and bloom about the same time.

Twisted Stalk is described by its name, and bears single pink bells in the axils of the leaves, followed later by a red berry. Solomon's Seal has a single straight stalk with greenish bells hanging from the base of each leaf. These develop into bluish-black berries. The large Solomon's Seal is a popular cultivated plant which sometimes escapes into the wilds. This last group bloom towards the end of May, when the Iris and Peonies take over the centre of attention in the home garden, and the wild flower garden may be left to become an attractive bed of green.

To avoid monotony of height during the summer a few ferns may well be added. One of the most commonly used is the Cinnamon Fern (Fig. 4). It is shown in the young or "fiddle-head" stage before the long fronds unroll to the length of about three feet. In the centre of these green fronds several fertile fronds of a bright cinnamon colour develop. They produce the spores which grow into new ferns.

In conclusion, the beginner who wishes to establish a wild flower garden could be guided by the list given in order of flowering succession in the fourth paragraph of this article. They have not all been described, but they have been selected as the most suitable and effective in the experience of local gardeners.

A Correction

In an item which appeared in the March issue of the *Journal* we stated that the Dominion Government is setting up a horse-processing plant in Saskatchewan. This was not correct: the plant is being built by the Saskatchewan Horse Co-operative Marketing Association at Swift Current.

Parents and Children

by Mary Avison

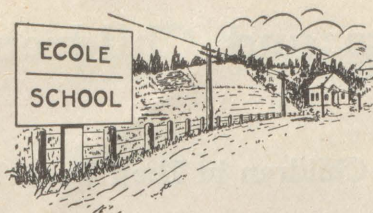
Are Your Children in Their Teens?

To parents of teen-agers comes suddenly the realisation that their children are growing up. To parents who recognize that the ultimate purpose of parenthood is that they should hand over the reins of responsibility to their children, the present time presents a tremendous opportunity and challenge.

Many of us find it very hard and unpleasant to accept and adjust to change. We would like things to go along as they always have, to have people behave as they did in our younger days, but the blindest of us are forced to recognize that changes must come, that a new generation cannot and ought not to be like its parents. They must live in their own world, in their own way. We cannot keep them in our world. Nevertheless, we too often find ourselves resenting the differences we see in our children, being hurt or angry because they do not think as we do, or like the things we used to like.

Why is this so? Do we not believe in the future? Do we not trust them to be at least as intelligent in facing the problems and using the opportunities of their day, as we have been in ours? Perhaps it is that we are aware of our own mistakes and errors, from which we think we can protect them. And we forgot how important those mistakes were to our learning. How little we would really know of life if we had always been protected and prevented from trying our wings and bumping our heads.

With old age comes tolerance, they say. We fight for the rights of man to decide for themselves. What form of life they want to live, for freedom to hear all sides of a question and to choose. In the homes where these purposes and aims are fully understood, children will be encouraged early to look at both sides of every question, to inquire into *all* the facts, not those only which support the side they prefer. Family discussions which are not intended to indoctrinate but to elucidate, family libraries (books, magazines, pamphlets, newspapers) that aim at providing understanding of those with whom we disagree, or with whom we have little contact, groups where we meet those who differ from us in politics, religion, or philosophy of life, in social, educational and economic background, in race and even language: all these are signs that we do not fear difference, that we do not mistrust our children's ability to distinguish values for themselves, that we are mature enough to be not only tolerant ourselves, but to encourage our sons and daughters in the pursuit of truth, wherever it appears.



LIVING AND LEARNING



Watch Dog for Farmers on War Assets

R. A. Stewart a farmer from Almonte came to Montreal on March 12th to represent the Canadian Federation of Agriculture at the War Assets Corporation. He was sent there by the farm organizations of Canada to view the declarations passed through the Corporation and to get the fullest possible information respecting anything of interest and value to the farming industry.

Mr. Stewart issues a weekly report to the member bodies of the Federation a copy of which is received at the Quebec Farm Forum office.

"The Crown Assets Allocation Committee, located at Ottawa, has the task of declaring what is surplus from war needs, respecting every type of materials, equipment, buildings, etc. Declaration is made in respect to each individual type of material, etc. These declarations are received from Crown Assets by the War Assets Corporation in Montreal, whose primary task is the disposal of such surplus to the general public, in accordance with the policy set by the Government.

"When these declarations are received, they are sorted by Central Registry, and allotted their file numbers, which provides for their identification. They are then allocated to the various divisions handling each type of material. There are at present seven such divisions, as for instance, the Aircraft Divisions, the real estate division, the steel division, and so forth. (See pamphlet issued by War Assets). The declarations are then sifted down through the various sub-divisions until every bit of usable goods, or equipment, or assets of any kind, is surveyed, evaluated and includes the heads of the various divisions with whom I placed in line for disposal to the public.

"Having the opportunity of scanning all declarations before they go through, I have followed the practice, since the beginning, of making notes on everything of importance. I might say that I have received the utmost co-operation from all officials of the company I have had occasion to approach in connection with my duties. This includes the heads of the various divisions with whom I dis-

cussed the disposal of material and equipment of importance to agriculture.

"Here are a number of examples of how I have been able to operate in the interests of the farming industry, since coming on the job. Most of these are by way of finding a use for some article or type of material other than that for which it was first designed," stated Mr. Stewart in his first report.

There followed in Mr. Stewart's report an interesting description of that which had been done in the Corporation with respect to a number of materials which were adapted to farm use.

Surplus chemicals — potassium carbonate was found to have a decided value in growing high-class soup peas, and a quantity was purchased by the Co-opérative Fédérée in Montreal. Co-

operatives have been informed of the availability of rubberized anti-gas suits. Scoop scrapers used for fighting incendiary bombs were scrutinized and specifications sent to the affiliates of the Federation. Airplane parts were studied with a view to their use to farmers, and particularly the business of using airplane wheels for trailers and wheelbarrows.

Mr. Stewart has been working closely with departments of agriculture and agricultural societies assisting them in securing materials that could be used by these societies in the building and maintenance of their plants.

JUNE 2nd MEETING

Macdonald College will be the scene of the 5th annual meeting of the Quebec Council of Farm Forums. Founded in 1941, this Council has grown rapidly into an organization that commands the support of farm people in the English-speaking areas of Quebec, and the respect of the Quebec Department of Agriculture, the Co-opérative Fédérée, and the Union Catholique des Cultivateurs. It is a member of the Canadian Federation of Agriculture, and was responsible for initiating an important resolution at the Regina Conference which made the headlines in Western Newspapers and was included in the brief of the Federation to the Dominion cabinet.

Saturday, June 2, will see farmers from Bury to Shawville — over 300 miles apart who gladly come at their own expense to share in the deliberations of the annual meeting, to hear speakers, and to enjoy the well-planned tours which are conducted by the college staff.

Mr. Allan Crutchfield, Council president, will preside. Speakers and special features will be announced in the press and radio.

Huntingdon Students Hear About Rural Life

The people of Canada must take five important steps to make rural life as interesting and profitable as it should be, stated R. Alex Sim, of the Adult Education Service, Macdonald College, in an address to the senior students of the Huntingdon High School on April 30th.

It is important that farm people should enjoy full equality in the future for if we are to have a great Canada we must have a great people, and a great people will only grow where there are unlimited opportunities for all. The farm people of Canada are the most important single group in the country, comprising one-third of the population. They provide the country with a major portion of its food, have a tremendous surplus for exports of wheat, bacon and other products, and most important of all it exports the surplus of its population to the city from which many important national leaders are drawn.

The occasion of this address was at a meeting called by the Principal, J. B. MacMillan in co-operation with the Students Council in an effort to bring both town and city children to realize the values and benefits of rural life, and it was an important occasion in the school program with the High School band performing under the leadership of Donald Moore.

The five steps outlined by Mr. Sim in the development of a better rural life were:—a higher income, improved machinery, extended electrification, increasing use of science, and better education for both young and old.

With equality of income the greatest single disadvantage in remaining on the farm would be wiped out.

Tremendous strides have been made in this direction through co-operatives and farm organizations, like the Canadian Federation of Agriculture, but they depend on the intelligent participation of the farmers and their ability to work together.

Drudgery will only be removed from the farm when the farmers have electrification and the gadgets that can use it more fully both in the house and barn.

Already important steps have been made in introducing labour-saving machinery like milking machines, tractors, and the like. Unfortunately, all farmers cannot afford these conveniences and the reason is not only because of the price, but because they do not practise efficient methods of land use, scientific management of plants and animals, competent business methods of financing and marketing. Agricultural colleges are one of the important agencies in assisting farmers to appreciate scientific methods of farming both through research and their teaching programs, but the key stone to the success of all these ventures is education. Education not in any narrow sense but in the broad sense in which the leaders of Denmark a century ago visualized it when they said, "You can be pretty certain a man will be a good farmer if you teach him to think." Modern school plants like the one in Huntingdon and many other centres in Quebec are the first step in this direction where programs of adult education like Film Circuits and Farm Forums, fill an important need in developing a self-reliant and energetic farm people.

Ross of Film Board Meets Ormstown Study Club

Dr. Malcolm Ross, Director of Distribution of the National Film Board brought the world wide activities of the National Film Board graphically to the attention of the members of the Ormstown Study Club at a special meeting on April 25, at which Mr. Adam MacNeil presided.

Canadians are familiar with the rural film circuits, and the industrial and trade union circuits, the libraries and volunteer circuits, Dr. Ross told the Ormstown audience. They also know that the 'Canada Carries On' series of films appears in Canadian theatres. Less familiar to Canadians perhaps was the work of publicizing Canada's resources, work which the film does and is admirably suited to do.

Eleven Canadian films with Spanish and Portuguese sound tracks are being circulated throughout Latin America. Canadian films are shipped to Russia where the commentary is added in Russian. A big field for distribution will open up in France soon — since so many of our films have already been produced in the French language. Great Britain, the United States, and the sister Dominions

use Canadian films both in theatrical and non-theatrical outlets.

Mr. MacNeil thanked Dr. Ross for describing to the study group the work of the National Film Board, and he also expressed his gratitude for the film programs received during the past few years.

Previous to the address two films were shown, and the evening closed with recreation and refreshments.

C.B.C. Summer Topics

Ab Kemp, the producer of Farm Forum broadcasts, has this to say about the "Summer-Fallow" series.

"May 28th I expect to use a dramatic script on the invention of the oil lamp, leading up to electrification and power with possibly a bit on Daylight Saving Time. June 25th — this program will be on Forum organization and Forum findings. July and August programs will deal with better veterinary services in Canada, particularly obtaining government grants."

There will be more definite announcements from the CBC shortly and those interested are advised to listen to the noon broadcasts for announcements.

The Farm Forums Want to Know

Question—Hallerton in Huntingdon Co. "Last fall farmers had a surplus of meat or at least fat stock moved very slowly from the farm. United States was short of beef and should have been offered all the meat in our cold storage then; this was suggested but it was said that this would upset Canada's price ceiling as United States prices were higher than ours. Could our government not have taken that extra price and created a fund much as New Zealand is doing now for mutual trade after the war. Also some time this winter farmers were advised to liquidate a good deal of beef to reduce number of cattle for after the war. What is one to believe?"

Answer — "Canada has export contracts to supply all possible surplus beef and bacon to the United Kingdom, till at least the end of 1946. While it is true some temporary congestion occurred at stock yards last fall, this was due to the fact that a lot of producers wanted to get their cattle to market at the same time, and also packing plants were short of labour at first, until the harvest was completed and extra labour could come in off the farms. After the plants got operating at full capacity, the congestion soon disappeared. The arrangement to ship surplus meat to Britain, not the United States, is an understanding reached between the three countries, but the Minister of Agriculture, Hon. James G. Gardiner has indicated that restrictions on shipping surplus live cattle to the United States will be removed as soon as conditions warrant. At the present time there is an over-all world meat shortage, and therefore a market for all the meat animals which can be put through Canadian packing plants. Farmers have not been advised by the Department of Agriculture to liquidate cattle on farms, although with cattle numbers the highest on record, the agricultural program for 1945 indicates no further increases over present cattle population may be necessary".

Kingscroft in Stanstead County and Byrd Settlement

Both the above groups asked for information about reforestation. Here is a digest of the information the Farm Forum office secured from Roch Delisle, F. E., Director, Forest Extension Bureau, Department of Lands and Forests, Quebec.

The Extension Bureau of the Lands and Forest Department was created in 1942 to promote a better management of the woodlands in the hands of small and medium owners and give those owners the technical guidance they might want for a proper tending of their sugar bushes and woodlots.

A small owner is one who holds less than 300 acres of forested land, whilst the medium one owns from 300 to 2,000 acres. There are approximately 200,000 small and medium owners.

The forest engineers of the Extension Bureau pay visits to woodlands owners, give lectures on silviculture in inter-

mediate-agricultural schools, hold lecture-demonstrations in the forest, lecture with slide projection in public halls, and so on. Their services are free of charge.

Reforestation is not the main problem in the improvement of privately-owned woodlands. Much more important is, for an example, the protection of the woodlands from stock. However, it stands that many owners have to reforest.

A reforestation project must be carefully planned, and it is to the interest of the owner to seek advice from his forester.

Any owner of land unfit for agriculture wishing to reforest such land may either buy the plants and remain entitled to the premium of \$10.00 per acre paid by the Department of Lands and Forests, five years after planting, if all the conditions stated in the order-in-council No. 1015 have been fulfilled, or request a grant of plants and waive the premium. We recommend the latter, initial disbursement being less.

The grantee must, however pay the packing and shipping charges, if he does not call for his plants at the nursery.

If the plantation is done with wild plants, the premium is paid.

A section of the order-in-council of special interest states:

"So long as at least three hundred trees to the acre are kept, lands replanted in trees shall retain, for a period of thirty years, the valuation which they had before the planting; at the expiration of such period of thirty years, the municipal valuation of such plantations provided they remain as wooded land, can only be changed every ten years."

What the Forums are Doing

April and May are the two months when the closing rallies of the Farm Forums are held, business for the year is wound up, county representatives to the Quebec Council of Farm Forums appointed, experiences exchanged between forums, and acquaintances renewed after a long hard winter.

So many rallies have been held recently that space will not permit us to do more than list them.

A joint Rally for the Forums of Chateauguay-Huntingdon Counties was well attended in the Ormstown High School. This meeting was planned under the auspices of the Chateauguay-Huntingdon District Committee. Prof. H. R. C. Avison and R. Alex Sim were the guest speakers. J. D. Lang was the chairman and Allan Crutchfield, secretary-treasurer of the committee gave his report. The

various districts in the county held meetings and appointed their representatives to the committee and J. D. Lang was appointed representative for Chateaugay County to the Quebec Council of Farm Forums.

Huntingdon, April 13th — under the chairmanship of Allan Crutchfield a Rally was held in the Huntingdon High School for the Forums of the County. The provincial Farm Forum secretary was the guest speaker. An orchestra from Dundee provided music for dancing.

Howick, April 25th chose an important date for their meeting, the opening of the San Francisco conference. Temperance Hall was packed with young and old. A splendid program was provided by simply asking each forum to put on a number. The chairman was Rev. G. E. Bingham. The guests at this meeting were Mr. M. Ross from the National Film Board, Robert Taylor, field representative of the National Film Board and R. Alex Sim.

Lachute, April 26th — At the Lachute High School a large group which overtaxed the seating capacity of the room met to mark the closing of the Farm Forum season in Argenteuil County. The chairman, Mr. S. Armstrong was re-elected to represent Argenteuil County on the Quebec Council of Farm Forums for another year. After the business meeting and an address from the provincial secretary, the ladies served refreshments in the Household Science room. The evening closed by card playing and dancing with Lowes' orchestra.

Other rallies scheduled are at Farrellton for Gatineau County on April 30th — Sutton for Brome-Mississquoi Counties on April 30th. Meetings for Pontiac County at Shawville and Compton County at Cookshire are scheduled but dates are not yet selected. So far the provincial office has not heard from Richmond, Sherbrooke, Stanstead, Shefford Counties.

Handicraft Courses at Macdonald College

About this time last year we told you through the Journal of the handicraft courses that we offered at Macdonald College during the summer months. These courses proved remarkably popular for adults, school teachers, nurses, ministers and their wives, and whole families came to Macdonald College from all provinces Nova Scotia to Saskatchewan. This year similar courses are available to you in a wider range of crafts. These include:

Weaving on small looms to make belts, sashes, scarves, towels, table runners.

Leatherwork in which slippers, purses, gloves, belts, under-arm bags are thonged, sewn, stamped and tooled.

Woodwork — turning candy dishes, plates, bowls, lamp stands, etc.

Weaving, leatherwork, and woodturning requires 4 weeks of continuous study to complete.

Plastics — making bracelets, rings, forks, spoons, and the like from clear and colored plexiglas.

Lino block printing — various types of cards, book plates, etc. in one and a few colors.

Rug Making — hooking, braiding and weaving floor and wall rugs.

Plastics, lino block printing and rug making require 2 weeks of continuous study. It is not necessary that courses be completed at one time, credits may accumulate over a period of 2 or 3 summers.

All of these crafts are extremely practical. They can be done in the home, school, church or hospital. During the course each person learns to make many tools and pieces of equipment and actually builds several of them. All equipment built, as well as all articles made by each student in any craft become his own property and may be taken home.

The charges for any of these courses or for any combination of projects in them is the same, namely \$17.00 per week for tuition, instruction and all necessary materials, plus \$8.00 to \$10.00 per week for board and lodging, make a total charge of \$25.00 a week or slightly more. It is interesting to note that on the average, the retail value of tools, equipment and craft articles made is about equal to the total cost of a course.

In our Division all instruction is individual, so people may start at any time that arrangements can be made for teaching space and living accommodation. *Because of crowded conditions, it is essential that confirmation of accommodations be received before coming to the College.* Further information about the courses will be sent to you gladly. Please write to Director of Handicrafts.



A group of Air Force handicrafts students look over some of the articles they made at Macdonald College.



THE COLLEGE PAGE

News of the College — Staff, Students, Graduates

Scottish University Honours Dean Laird



To the list of degrees which he is entitled to write after his name, Sinclair Laird, Professor of Education of McGill University and Dean of the School for Teachers at Macdonald College will soon add an LL.D., for at the Convocation to be held on June 29th the University of St.

Andrews will confer on him the honorary degree of Doctor of Laws.

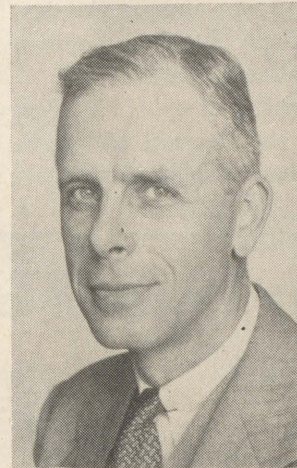
This is the latest in a long list of honours which have been bestowed upon Dean Laird during his distinguished career in the service of education. He was made Officier de l'Instruction Publique by the French Government: he has received the Order of Scholastic Merit and the Gold Medal of the Government of Quebec; two years ago the University of Montreal conferred on him the honorary degree of Docteur en Pédagogie (D.Paed.)

Dean Laird will fly to Scotland to receive his degree, but much as he would like to spend some time on the other side, he plans to return to Canada immediately after the Convocation so that he will be here to direct the work of the Summer School for Teachers.

To him, our hearty congratulations.

Prof. L. C. Raymond was the guest of honour at the annual "agriculture night" of the Waterloo Kiwanians on April 21st, when farmers of the district and guests from Granby were invited to the dinner. Prof. Raymond spoke on his favourite subject, and one with which he is eminently qualified to deal — pasture improvement.

E. W. Crampton, F.R.S.C.



Dr. E. W. Crampton, Professor of Animal Nutrition at Macdonald College and Chairman of the Department of Nutrition in the Faculty of Graduate Studies and Research of McGill University, has been named a Fellow of the Royal Society of Canada.

The research work in nutrition at the College was originated and developed by Dr. Crampton, who has made many valuable contributions to scientific knowledge in his field; his work has been of outstanding quality and is so recognized by his colleagues. During the war years his laboratories have been almost entirely occupied with research projects undertaken at the request of Federal and Provincial Government departments.

In 1942 he was made Commander of the Order of Agricultural Merit, the highest honour given by the Provincial Government for service to agriculture.

C.W.A.C. Training Centre Leaves The College

Teachers' and Homemaker Courses Resumed

On May 31st the Canadian Women's Army Corps training centre at Macdonald College will move to Kitchener, Ont., and all the buildings and other property which had been made available to them by the college will be returned to us. The immediate effect of this will be that the School for Teachers will be back at Macdonald this fall, and the "Homemaker" course in Household Science will again be offered.

It was during the Christmas holidays, in 1941, that the College authorities were notified that the C.W.A.C. wanted to establish a basic training centre at Macdonald College. The news came as a distinct shock, especially as it was proposed to get the training centre into operation as soon as possible, which meant, of course, in the middle of the college session. However, planning began at once and the next two months were hectic ones.

The C.W.A.C. requisitioned the entire Women's Residence. This meant that we had to find other accommodation for all the women students almost at once, and the finding thereof involved many complicated manoeuvres. First of all, the School for Teachers — staff, students and equipment — was moved into Montreal, where quarters were provided by the University in Strathcona Hall on Sherbrooke Street, just opposite the University gates. This in turn involved finding new quarters for the McGill students who were at that time living in Strathcona Hall. Next, the top floor of the Main Building at Macdonald was made over into dormitories and the men students in residence moved into them on February 14th, 1942; four days later, the women students in Household Science moved across the campus and into what used to be the Men's Residence. The new quarters were not as spacious as the old ones, and the surplus was taken care of by opening two supplementary residences, one for men and one for women, on the campus.

During the following summer the Army took over the newly-installed dormitories in the Main Building, which taxed our residence accommodation still further. It was therefore decided to cancel the Homemaker course in Household Science, which would reduce the number of women students by about fifty, and to remodel the Men's Residence so that both men and women students could live under the same roof. This was done during the summer and when the students returned in the Fall their new home was ready for them.

The Women's Residence, which became the C.W.A.C. barracks, contained the kitchens and dining-room, and for the first few months of the "invasion" both students and Quacks shared the dining-room. But by the Fall of 1942 a new dining-room of temporary construction, with a well-equipped kitchen, had been built as an annex to the Men's Residence and was found very satisfactory.

Despite rumours about "H" huts to be built all over the campus, drill halls here and recreation huts there, the physical appearance of the grounds has not changed greatly as a result of the C.W.A.C. occupation. A drill hall has been put up on the river road, which may or may not serve later as a covered rink for the students: a gas hut was built near the dump and a hospital hut was put up between the Women's Residence and the Power House. In the rear of the residence a canteen was built but all these buildings, with the exception of the drill hall, are temporary structures and will soon be removed.

For the first time in four years we have no Army girls marching on the campus or walking through the buildings. We are, in a way, sorry to see them go, for the smart C.W.A.C. uniforms added an unusual touch of colour, and relations between the Army authorities and those of the College were always most cordial. But we are looking forward with keen anticipation to next September, when we will be able to welcome the School for Teachers back home, and the familiar blue and white uniforms will once again be seen in the corridors and classrooms.

New Deputy Minister is Macdonald Graduate



Mr. Jules Simard, newly - appointed Deputy Minister of Agriculture for the Province of Quebec, graduated from Macdonald College with a B.S.A. degree with the class of 1912, the second class to graduate from the college.

On graduation he accepted a position with the Federal Seed and Fertilizer Board and from 1912 until 1927 he was dis-

trict superintendent for this Board with headquarters in Quebec; it was during his tenure of office that the first laboratory for the analysis of seeds was organized. From 1927 until 1930 he held a similar position in the Maritime Provinces, then moved to Montreal to take charge of seed inspection, feed and fertilizers for Quebec, a post which he relinquished on his new appointment.

Mr. Simard was one of the founders of the Canadian Society of Technical Agriculturists and of the Quebec Co-operative Seed Producers' Association, and is a member of a number of professional organizations. In 1937, in recognition of services rendered to agriculture, he was named Commander of the Order of Agricultural Merit. He is a practical farmer and has a farm and orchard at Frelighsburg.

The College extends its congratulations to Mr. Simard, and wishes him well in his new and responsible position.

Returned Soldiers as Rural Repair Men

One of the new undertakings at Macdonald College in the near future will be a course in Rural Repair Mechanics for returned service men. The course includes training in a variety of repair work required in farming communities and is approved by the Department of Veterans' Affairs and the Canadian Legion Educational Services. A booklet on the work has been prepared by the C.L.E.S. and is available from any of their branch offices. It is entitled "Rural Repair Shops" and is group discussion series Pamphlet No. 4 — (15).

With the increased use of tractors and all machinery on farms and the introduction of electricity into many areas where it was not available before, there has arisen a

definite need for repair services of a type far beyond that which can be provided by the old time blacksmith shop or even the more modern rural garages. The rural repair man of the future must be able to take care of many kinds of work, including oxy-acetylene and electric welding, machine shop work, blacksmithing and sheet metal work. He must also have a thorough knowledge of all kinds of farm machinery, particularly from the standpoints of trouble shooting and repairs, and must be able to overhaul tractors, gas engines and electrical equipment. It is these things that the course in Rural Repair Mechanics is designed to teach.

The course is one of intensive practical training of six months duration. The following is a resume of subjects, the number of lectures and work periods in each:

ARITHMETIC AND ACCOUNTING: (50 lect.). Review of elementary rules and operations, including common and decimal fractions, percentage, ratio and proportion. This to be followed by practice in the solution of shop and structural problems. Simple business accounting.

FARM POWER EQUIPMENT: (50 lect., 50 work periods.). Gas engine principles; automotive electricity; storage batteries; magnetoes, starters, generators, wiring and voltage regulators; carburetion and fuels; cooling; lubrication; power transmission; repair projects applying to tractors, gas engines and electric motors.

FARM MACHINERY: (50 lect., 50 work periods.). A study of tillage, harvesting and spraying machinery from the standpoints of their use on farms, design of modern equipment, its maintenance and reconditioning as applicable to implement service agencies.

MACHINE SHOP: (25 lect., 75 work periods). Shop practice in the use of the engine lathe, screw cutting, grinding; the shaper, the drill press, tool and drill sharpening and the use of calipers and micrometers, metal finish. Bench work.

SHOPWORK IN METALS (25 lect., 50 work periods). (a) Blacksmithing and forge work; the forge fire; identification of steel and iron; forge work in iron; steel and tool making; welding and tempering. (b) Practice in soldering and sheet metal repair work.

OXY-ACETYLENE WELDING: (12 lect., 25 work periods). Lectures and practical work in the oxy-acetylene method of welding. Also the use of the hydrogen flame in welding aluminum and lead burning.

ELECTRIC WELDING: (12 lect., 25 work periods). Lectures and practical work with D.C. and A.C. Current for welding. Welding technique and the selection of correct materials for various jobs.

AGRICULTURE: A course of lectures on general agriculture dealing with types of farming, sources of farm income and rural problems.

There are large numbers of men in the armed forces who have had considerable training in mechanical equipment used in the war. Such men can use their training to

good advantage in peace time if the skill they already possess is supplemented with special training to suit agricultural requirements. The type of student to whom this course should appeal are men who have been brought up on a farm but who do not wish to do actual farming, or men who have a rural background but who may not be actual farmers.

There is no question about the need for well trained men to serve the industry of agriculture in the postwar years. Agriculture is mechanized as it has never been before and the availability of well trained men with well equipped shops will be a boon to farmers when tractors and other equipment require repairs and over-hauling. Also, we believe that life in our smaller towns and villages has many attractions over that in a city, and men equipped to take care of rural repair service can certainly consider themselves independent so far as pleasant employment and freedom of enterprise are concerned.

THIS YEAR'S GRADUATES



B.Sc. (Agr.)



B.Sc. (H. Ec.)

Alcohol from Wheat and Wood

Our scientists — and chemurgy hasn't stepped far from the laboratory as yet—are seeking to apply chemurgy to our big crops, wheat and lumber. For these are two sources of industrial alcohol which we've needed so badly during the war. For one thing, smokeless powder in munitions needs alcohol, and so does anti-freeze. Alcohol is the backbone of synthetic rubber. Alcohol is a base for plenty of chemicals used in warfare. We used to get industrial alcohol from molasses imported from the West Indies. The big trouble when we look forward to peacetime years is that you can't extract alcohol from native wheat as cheaply as you can from imported molasses.

Wheat *has* been processed for alcohol during the war, but the peacetime outlook is not so promising. In an industrial project the raw materials used in the plant have to be so steady in supply and price or the manufacturer can't keep going.

Now in former years, wheat fluctuated in price. It may again. The surplus is never the same. It's true that quantity is more important than the quality of wheat which might supply alcohol to industry. But what farmers are going to specialize in large and steady production of low grade or damaged wheat?

The prospect of getting alcohol from the residue of wood pulp — that's sulphite liquor — is really promising. Scientists say that alcohol extracted from this source is of high grade and the process is fairly cheap. They think that the immense waste of our forests can be cut down considerably by using the slashed or mishapen or stunted trees for this purpose.

The conversion of wheat and potato starch into sugars and syrups formerly made from corn has a fairly good future and two western plants are already processing grain for sugar.

Some wastes, some surpluses can be put to use now, but it's a long, long trail from the test tube to the industrial plant. We'll need more industry in this country, better methods of cultivation, cheaper processing before chemurgy solves every problem of surplus farm product.

Nova Scotia Sets Up Loan Funds for Cold Storage Plants

An Act of Parliament which provides for loans for the establishment of cold storage plants in Nova Scotia passed the provincial legislature lately. Under the terms of the new act it should be possible for small groups, as well as for larger organizations, to provide local cold storage, as no minimum amount is set to the size of any loan that may be made.

The Act is a direct result of extensive surveys made

in Nova Scotia, which indicated the need for adequate cold storage facilities for the proper handling of fruits, poultry products, meats and some vegetables. The provincial loans will probably cover up to fifty percent of the cost of any plant which is approved for the Federal cold storage grant (which totals thirty percent of the cost of plant construction and equipment.) The Federal aid is a grant: the provincial aid will be a loan.

Repayment of these loans must be commenced within three years of the date of the loan; not less than half the loan must be repaid within ten years and the balance within twenty years of the date of the loan. All loans are to be secured by first mortgage and deed of trust in favour of the Minister of Agriculture.

Nova Scotia Farmers Start Early

The spring got off to an early start in Nova Scotia this year. In a dispatch dated April 21st, W. V. Longley says that the early working of the land and the early seeding is a record for recent years.

At one point in Yarmouth County potatoes were planted the last week in March, a good twenty days earlier than the average planting date over a number of years. Ten acres of grain were planted at Truro the middle of April, and in Cape Breton beets and carrots were planted during the week of April 16th, at least two weeks ahead of last year. Reports from all over the province indicate an early starting of grass and the hay situation has definitely eased; much stock is out on pasture. We have had no reports as yet of frost damage.

Credit Unions Increase

In Nova Scotia Credit Unions have increased from 71 in 1936 to 213 in 1944, and the membership has grown from 12,178 in 1936 to 31,796 last year. Total assets in 1944 were \$2,206,797.98 as against \$269,044.96 in 1936. In the eight years of operation there was charged against the Guaranty Fund only \$3,350.45.

Ontario gained 58 new Credit Unions during 1944, making a total of 220 (net.)

The Ontario League has 146 member Credit Unions, 36 of which joined up in 1944.

Credit Union business boomed in Saskatchewan during 1944, with total assets up by more than \$1,500,000, it was shown in the report of the department of co-operation and co-operative development, tabled in the legislature. Total assets of Credit Unions at December 31, 1944, were \$2,445,555 compared with \$797,707 a year ago, a gain of 207 percent.

101 new Credit Unions were organized in Canada in 1944.

HOG PRODUCERS!

LOOK AHEAD...

The large wartime production of hogs has resulted in a very wide distribution of Canadian bacon in Great Britain. Canada has become Britain's main source of supply. A market for all the bacon which can be produced until the end of 1946 is assured.

It is important to each Canadian hog producer that as much of this market as possible be retained in the years to come. If the British consumer is to continue as a steady customer for a large volume of Canadian bacon, it means that hog production will have to be held at a level high enough to ensure constant and large supplies on the British market.

Whether or not Canadian bacon maintains an important place on the post-war British market and commands the top price on that market depends on the regular and steady supplies of high quality bacon in large volume.

Think it over!

You are building a sound industry not only in your own interest but for Canada if:—

You are producing all the hogs that your farm practice will permit.

Your hog production is steady.

You are producing a high percentage of grade A hogs.

PLAN AHEAD

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**THINK
IN TERMS OF
VOLUME
AS WELL AS
QUALITY**

AGRICULTURAL SUPPLIES BOARD
Dominion Department of Agriculture, Ottawa
Honourable James G. Gardiner, Minister